THE NATURAL HISTORY OF SOUTH AFRICA

F. W. FITZSIMONS

MAMMALS

VOL. III.

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THE NATURAL HISTORY OF SOUTH AFRICA

The Natural History of South Africa

By F. W. FITZSIMONS, F.Z.S., F.R.M.S., etc. Director, Port Elizabeth Museum. With Illustrations from Photographs. Four Volumes. Crown 8vo.

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A sub-species of Burchell's Zebra from "Tafelberg" in the Middelburg Division of the Cape Province. Its legs are banded to the hoofs.

Foals of a sub-species of Burchell's Zebra from the Middelburg Division of the Cape Province.

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THE NATURAL HISTORY OF SOUTH AFRICA

INCLUDING THE HARTEBEESTS, WILDEBEESTS, DUIKERS, STEENBOKS, WATERBUCKS, REEDBUCKS, IMPALA, SPRINGBUCK, GEMSBOK, BUSHBUCKS, KUDU, ELAND, CAPE BUFFALO, GIRAFFE, HIPPOPOTAMUS, BOSCH VARK, QUAGGA, ZEBRAS, RHINOCEROS, KLIP DASSIE, AND AFRICAN ELEPHANT

599.9(68)

BY

F. W. FITZSIMONS, F.Z.S., F.R.M.S., &c.

DIRECTOR, PORT ELIZABETH MUSEUM

MAMMALS

IN FOUR VOLUMES

VOL. III

WITH ILLUSTRATIONS

LONGMANS, GREEN AND CO.

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SYSTEMATIC INDEX
OF THE ANIMALS IN VOLUME III[1]

Order: **UNGULATA**
Sub-order: **Artiodactyla**

Ungulate quadrupeds with at least two equal hoofed toes to each foot, viz. the cloven-footed mammals.

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Family: BOVIDÆ
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[1] I am indebted to Dr. Oldfield Thomas, F.R.S., of the British Museum (Natural History), for his kindness in revising the Systematic Index.

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1919

On front curve

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Bontebok	$16\frac{3}{8}$
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Blue Wildebeest	$32\frac{1}{2}$
Black Wildebeest	$26\frac{1}{2}$
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THE NATURAL HISTORY OF SOUTH AFRICA

THE HARTEBEEST

Africa from the Cape to the most northern limits is the home of the antelopes known as Hartebeest. One species known as the Bubal Hartebeest (*Bubalis boselaphus*) which is common in Northern Africa extends into Arabia. All the other species, of which there are several, are confined to Africa.

Only two species inhabit Africa south of the Zambesi and Cunene Rivers, viz. the Cape or Red Hartebeest and Lichtenstein's Hartebeest. The former is confined to Africa south of the Limpopo River, but the latter, which inhabits the north-eastern portion of South Africa, ranges into Central Africa.

The Dutch Voortrekkers gave the name of Hartebeest to this antelope from a fancied resemblance to a hart or stag, an animal which in point of size and colour it somewhat resembles.

Most members of the antelope tribe are exceedingly graceful in appearance and in their movements. The Hartebeest, on the contrary, owing to its height

at the shoulders being much greater than that at the hindquarters, and its rather ungainly-looking head, presents a rather ungraceful appearance, particularly so when running. In consequence of this elk-like form of body, the name of Alcelaphus (Elk-stag) was given to it, a name which was very appropriate; but following the law of priority, the older name of Bubalis was revived.

In the Hartebeest group of antelopes the females are horned, although, as in other species of horned female antelopes, the horns are not so robust as those of the male.

THE CAPE HARTEBEEST

(*Bubalis caama*)

Red or Rooi Hartebeest of the Colonists; Kaama of the Hottentots (*Smuts*) and Bechuanas (*Bryden*); Indhluzele of Zulus; Ixama of Amaxosa (*Stanford*); 'Ama ingama of Makalakas and Masawas (*Selous*).

The Cape Hartebeest formerly inhabited the whole of South Africa in immense numbers from the coastal districts of the Cape as far north as Limpopo River, and along the confines of the Kalahari Desert.

Sparrman and other travellers in South Africa in the early days of its colonisation, record the existence of this Hartebeest in the immediate neighbourhood of Cape Town and Port Elizabeth. Sclater mentions that they are stated to have existed in Beaufort West as late as 1864.

On the advent of the white man with his firearms the innumerable herds of Hartebeest were rapidly reduced in numbers, and the survivors were driven into the more remote districts. A few still linger in the north-west of the Cape Province, which is known as Namaqualand and Great Bushman Land. Further north they are not uncommon in South-West Africa and on the plains and open forests of British Bechuanaland, the Bechuanaland Protectorate and the north-west portion of the Transvaal. Briefly, the habitat of the Cape Hartebeest is Africa south of the Limpopo River. In the uplands of Natal, the Eastern Transvaal, Basutoland and the Orange Free State, a few are preserved on farms. On an estate in the Greytown District in Natal a large herd of Cape or Red Hartebeest have been preserved for many years. These bred so freely that it was found necessary to diminish their numbers at frequent intervals.

The Cape Hartebeest associates in small troops of six to about a dozen individuals and frequents the open plains and bush-veld, chiefly in the dry, desert-like western parts of the country. In the past large herds of at least fifty were frequently seen. Owing to long-continued persecution this animal has become exceedingly suspicious and wary, and on the slightest indication of danger it makes off at a tremendous pace which is greater than that of any other South African antelope, with the exception of the Sassaby. This Hartebeest, relying

upon its fleetness and ability to outdistance any horse, frequently pauses in its flight to gaze at its pursuer. In consequence it often falls a victim to the hunter armed with a long-range modern rifle. Although the speed of the Hartebeest when at full stride is very great, yet it has not the appearance of being such to the observer, and in consequence inexperienced sportsmen often exhaust their horses in a vain endeavour to overtake it.

In the past the principal natural enemies of the Cape Hartebeest, which kept its species in check, were the large carnivorous animals such as the Lion, Chita and Cape Hunting Dog. Lions sprang out upon it from places of concealment; the Chita cleverly stalked it; and the Cape Hunting Dogs pursued it in troops and ran it down, owing to their superiority in endurance, and the clever tactics which they often employed.

On the advent of the breeding season, the rival males fight in the most determined manner with one another, which results in the less physically fit individuals being driven off and prevented from breeding.

The Cape Hartebeest, in common with most of the other larger South African antelopes, suffers from Bot-flies. These flies deposit their eggs in the nasal and ear passages of the animal, and the larvæ or grubs which hatch from these eggs, feed upon the mucus exuded as a result of the irritation of the tissues set up by their presence. The

grubs often burrow into the frontal cavities of the skull. That these parasites are a source of constant irritation to the animal there can be no doubt, for the victim in a vain attempt to free itself is almost constantly sneezing and blowing. I examined a series of Hartebeest heads in Natal and found several of the larvæ of the Bot-fly in about one in every five of the heads. They were usually lodged high up in the nasal passages, but in several instances I discovered them in the frontal skull cavities and deep in the bony cavity of the ear. In two instances which came under my observation the damage to the mechanism of the ear was so serious that the sense of hearing had been quite destroyed.

After several months the grubs reach maturity and make their way into the nostrils, causing such intense irritation that in the violent sneezing which ensues, they are expelled and fall to the ground, where they at once bury themselves and turn into the chrysalis (*pupa*) condition, and eventually emerge as mature Bot-flies.

The flesh of the Hartebeest is dark in colour and rather tasteless when eaten fresh, but it makes excellent biltong.

The Hartebeest rarely attempt to use their horns against mankind, even when wounded and at bay.

In the intervals of feeding and resting, the males indulge largely in the sport of butting and fighting with one another, often upon their knees,

in order to make better use of their peculiar-shaped horns.

The eyes of the Hartebeest are set very high up on the head, and when the animal elevates its head to its maximum height, it is able to command an extensive view of the veld.

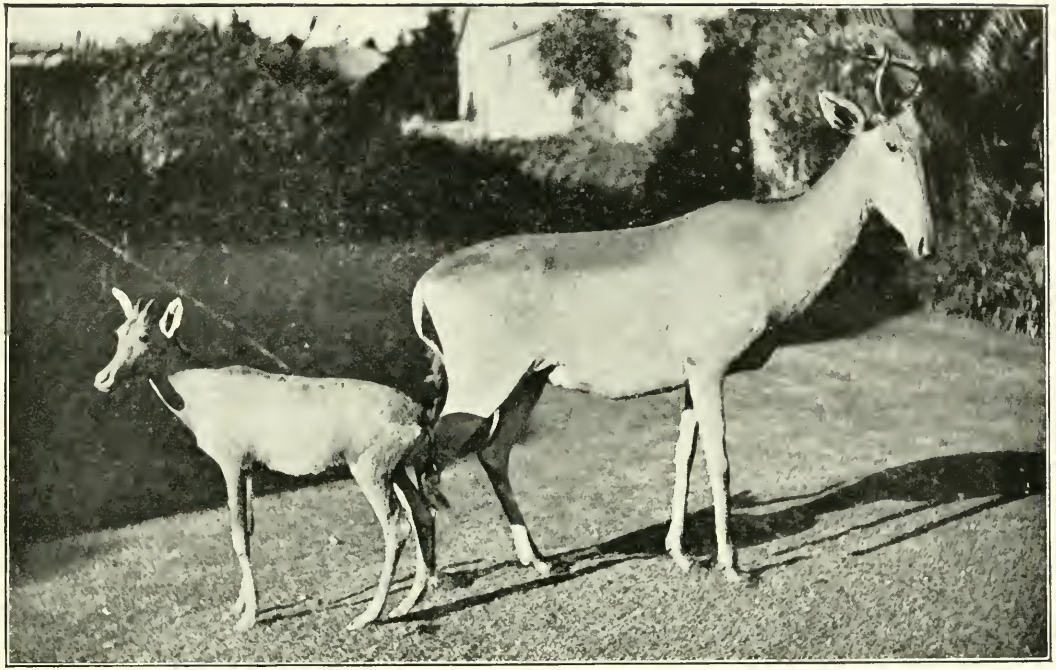
The skin has always been greatly sought after by the Bechuanaland tribes of natives for making large cloaks, better known as karosses.

These antelopes are able to go for long periods without drinking, for they have often been met with in the north Kalahari during the rainless periods of the year when no surface water was available.

Like many other antelopes, they often congregate at salt pans to lick the salt. These salt pans or surface ponds of salt-charged water are common in South Africa. Some of them are worked and yield large quantities of excellent salt. Many of the pans dry up completely for long periods owing to the droughts which are so prevalent in the western parts of South Africa.

The Hartebeest, when captured young, soon becomes docile and friendly, and will often go out to graze with domestic cows in the morning, and return to the homestead with them at sundown for its evening feed of fodder.

When observed moving about at its leisure in a paddock, this rather hulking-looking animal does not give the observer any inkling of the tremendous powers of endurance and fleetness it possesses.



Lichtenstein Hartebeest and calf.

This Hartebeest inhabits the plains on the north-eastern side of South Africa.

The Red or Cape Hartebeest is reddish-brown in colour; a black patch is present on the forehead, and a stripe of the same colour extends from the nostrils almost to the eyes on the front of the face. From between the horns a narrow line of black runs down the ridge of the neck to the shoulders; the fronts of the fore-legs are blackish, which is more pronounced on the upper parts to the knees; tail covered with black hairs commencing near the root. The average height of a male Cape Hartebeest at the shoulders is 4 feet.

The female is horned.

LICHTENSTEIN'S HARTEBEEST

(*Bubalis lichtensteini*)

Moff Hartebeest of the Transvaal Boers; Vacca de Mato (*Wood Cow*) of the Portuguese; Konze of Masubias; Inkulanondo of Mashonas; Kokotombwi of Barotse; Konzi in Chilala and Chibisa countries; Konshi in the Chinyanja.

Lichtenstein's Hartebeest inhabits the eastern part of South Africa, north of the Nuanetsi and Sabi Rivers of south-east Mashonaland, and up through the Pungwe Valley to the Zambesi. Beyond this river it extends up the eastern side of the continent to the line of latitude of Zanzibar. North of Zanzibar its place is taken by Coke's Hartebeest (*Bubalis cokei*). Lichtenstein's Hartebeest was first brought to notice by Dr. W. Peters who met with it in Mozambique during his travels in 1842-48, and named

it after the great traveller and Naturalist Lichtenstein.

This Hartebeest frequents the open grassy veld and bush-veld in small troops of five or six to a dozen individuals, and may frequently be seen grazing in company with other large species of antelopes such as the Gnu, Sable, Waterbuck and Impala.

The calves are usually born in October and November. It has a habit of drinking during the early morning and in the evening. The Lion, knowing the habits of this antelope, lies in ambush near its tracks to the drinking places, ready to spring or rush out and secure it for a meal.

The Lichtenstein Hartebeest is of the same average size as the Cape Hartebeest, but it differs consideraby in the shape of its horns, which are flatter at the base, more acutely curved backwards, and not set so high as those of its southern relative the Cape Hartebeest. The body is a rather bright rufous which becomes deeper along the back.

The lower front portions of the hind-legs from below the knees are black, and the fore-legs from above the knees to the hoofs are similarly marked. The chin is black, but the black blaze on the muzzle and the black patch on the forehead of the Cape Hartebeest are absent on this species.

The flesh is good, but should not be roasted or fried in its own fat, as the latter is hard, and when cool sticks to the teeth and the palate.

THE BONTEBOK

(*Damaliscus pygargus*)

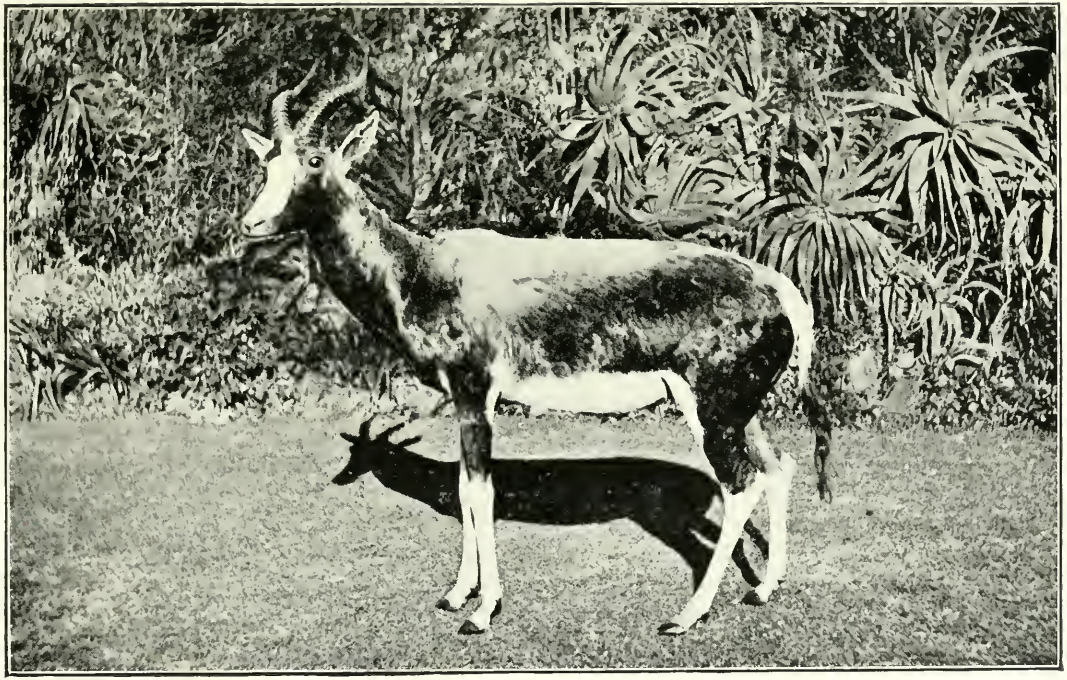
The Bontebok or Pied Goat of the Dutch colonists existed in tens of thousands in former days on the plains of the south-western corner of the Cape Province.

Harris mentions having found the Bontebok in vast numbers on the Karoo of the interior of the Cape Province, but this is doubted by Mr. W. L. Sclater. Harris was the first man to define clearly the difference between the Bontebok and Blesbok, and he would, therefore, not have been likely to confuse it with the latter, as was the case with other early travellers.

The Bontebok is now extinct in the wild or feral condition, and the only living representatives of this once numerous and strictly localised antelope are preserved on some estates in the Bredasdorp Division of the Cape Province. The history of how this antelope was saved from extinction was kindly contributed at my request by J. D. Albertyn, Esq., who has a thriving herd of Bontebok on his estate. I cannot do better than produce it verbatim. It is as follows :

" The Bontebok is one of an old family of antelopes known to exist in large herds on the coastal parts of what is now the Swellendam Division in the early days when the first European settlers came to these

parts. But, like most other big game, this species of antelope has been ruthlessly slaughtered by unscrupulous huntsmen. If it had not been for the foresight and love of preservation of the South African fauna of a few worthy landed proprietors, whose names I will mention further on, who came to settle in what they then called Overberg, it is quite evident that the beautiful Bontebok, so much admired to-day by lovers of game animals, would have belonged to the list of extinct antelopes. In the year 1837 Mr. Alexander Van der Byl, the then proprietor of 'Nacht Wacht,' seeing that the Bontebok was becoming a fast disappearing species, constructed a large camp of some 6000 acres on the western side of the Kars river, partly with galvanised wire and iron standards, and partly with a stone wall; and on the eastern side the water of the Kars river formed a natural boundary, and in this enclosure he succeeded in preserving some twenty-seven Bonteboks which gradually increased and diminished again in times of severe droughts, to which South Africa is so frequently subjected. The original twenty-seven antelopes have increased to 180, still in existence, and carefully preserved by the present owner of the farm. The example of Mr. Van der Byl to preserve the Bontebok was soon followed by the adjoining proprietors of Zeekoe Vley, who, although he did not go to the extent of expenses as his more well-to-do and progressive neighbour to fence in his Bontebok, found out that he could



Bontebok ram from a herd on Mr. J. D. Albertyn's farm "Nachtwacht," in the Bredasdorp Division of the Cape Province.

do much good by proclaiming a sanctuary on which he so strictly preserved them, that he could not be moved to part from his severe resolution to favour the son of his beloved sovereign (Queen Victoria) to have a shot at the Bontebok on his preserve; and His Royal Highness the Duke of Edinburgh had to confine his sport amongst the Bontebok of his host, Mr. Van der Byl of 'Nacht Wacht.' Further east, on the western side of the Breede River near Fort Beaufort, a herd of Bontebok was preserved by a large landowner, Mr. F. R. Myburgh, but after his death some twenty years ago, his ground was sold to different people who evidently did not in a like sense appreciate the care of the former owner, and the herd soon dwindled down, and I believe to-day less than a dozen are the sum total which mark the herd so carefully preserved by Mr. Myburgh near Fort Beaufort, so that practically all the Bontebok still in existence in their natural state are some 140 on the farm 'Nacht Wacht' owned by me, and 120 on the adjoining farm owned by Mr. P. K. Albertyn; twenty to thirty on the farm 'Vagelgezang,' joining Zeekoe Vley, belonging to Messrs. Myburgh Bros.; a few strayed buck on Zoetendale Vley, belonging to Mr. H. Van Breda, and on the farm Pattenberg, where the late Mr. Andrew Ohlsson with his great love for preserving South African game had started a small herd which have since been added to by me (the now proprietor of Pattenberg); and a herd of about

fifteen Bontebok and Blesbok mixed are flourishing and interbreeding.

"The open plains on which these antelopes are preserved are becoming very valuable for cultivation and grain growing, and it is possible they may eventually become quite extinct. If it were not for the careful preservation by the few landowners already mentioned, they would have been extinct long before now.

"The Bontebok stands about 3 feet 6 inches high when full grown, and weighs up to 200 lbs. It is of a rich dark brown in colour with white legs reaching up to the rump; the lower parts and the forehead are white. At a distance it looks brown and white, hence the name Bontebok. It frequents the open places, and does not seek shelter or cover to conceal itself from its pursuers. Its preservation lies in its keen eye, and the great swiftness with which it can ply its strong and tapering legs when once started by its persecutors.

"These antelopes went about in small herds, but were also seen in troops of up to 100.

Sometimes it drops its young, which is of a rich cream colour, in September and October, and it begins to change from fawn into the colour of the adult in March and April, but is not at its best before it is about three years old, when the male is of a slightly darker colour than the ewe.

"Nature has supplied it with the instinct to kill or drive from the herd those which are sick, feeble

or defective in any way, otherwise in the semi-confined conditions under which they have now to exist, inbreeding would cause their constitution to become so deteriorated that they would not survive the severeness of the periodical droughts. You can constantly see the stronger at work driving away and not infrequently killing off the weaker ones, so that there is no fear that a not fully-matured buck or an old buck on which age is telling on its vitality will be bred from. The very large proportion of male buck in the herds is attributed to too much inbreeding. This problem I am hopeful of solving in a few years' time, as I am now crossing at Pattenberg the Bontebok of the south with the Blesbok of the Free State, and the first result was a female."

The Bontebok, like its near neighbour the Blesbok, is by nature an inhabitant of the plains, and subsists on the stunted bushes and coarse grass with which they are covered. The herbage in the Bredasdorp Division to which they are now confined consists of rhenoster bush-heather and coarse grass.

When making off they run in single file, usually up-wind with their heads held low.

The period of gestation of this animal is from nine to ten months. The fawns at birth have no white blaze on the face, or white body and leg markings as in the adults.

The Bontebok no doubt was formerly a local variety of the Blesbok, which owing to the nature

of its environment has diverged so considerably in its markings from its progenitors that naturalists were justified in making a distinct species of it.

The Bontebok species may have come into existence through a Blesbok herd-bull being abnormal in colour, and the herd subsequently confining its range to the south-western portion of the Cape Province.

The Bontebok differs from the Blesbok in the following ways :

(1) Horns are black.

(2) Rump white.

(3) Lower half of legs white both on outer and inner sides.

The Bontebok interbreeds freely with the Blesbok, and the progeny are fertile.

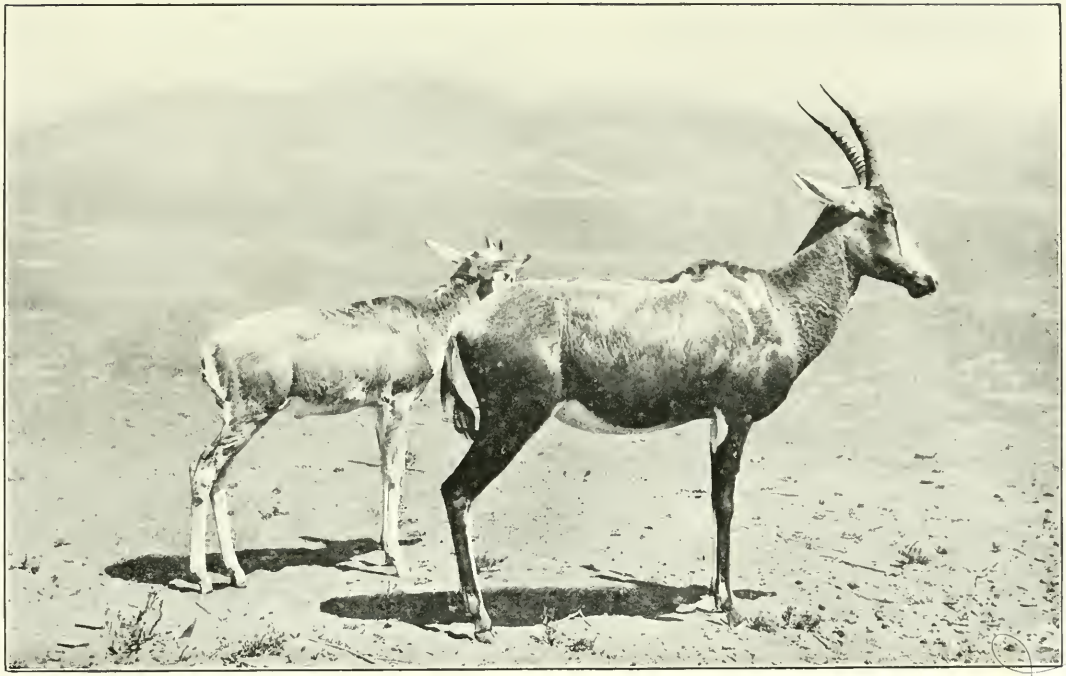
THE BLESBOK

(*Damaliscus albifrons*)

Ilinqua or Inŏni of Amaxosa ; Nŏni of Bechuanas and Basutos.

Blesbok is a South African Dutch word which means " the buck with a white face."

In the early days of the colonisation of South Africa, the Blesbok inhabited the veld in vast numbers in the north-eastern portions of the Cape Province, the Orange Free State, Transvaal and the eastern part of Bechuanaland. The northern limit of the Blesbok is the Limpopo River.



Blesbok and fawn. In the days of the Voortrekkers the Blesbok swarmed over the high veld. It is now preserved on a number of farms.

THE BLESBOK

In some of the sketches and paintings of the early travellers in South Africa, the Blesbok is depicted in small herds feeding out on the Karoo-veld along with the Zebra, Ostrich, Springbok and Wildebeest.

The Blesbok congregated in small herds and frequented the vast plains of the high veld, where it was hunted and slain in great numbers. Retiring from these exposed plains it fled to the bush-veld, but so relentlessly has it been hunted that to-day it has almost, if not quite, ceased to exist in the wild condition. Its species, however, is in no danger of extinction, for herds of them are preserved on a considerable number of fenced farms in the Cape Province and Free State. These captive antelopes breed freely and are regarded by the farmers as a valuable asset. The herds are thinned out each season and the carcases command a good price on the market, as the venison is excellent though somewhat dry. First-class biltong is made from it.

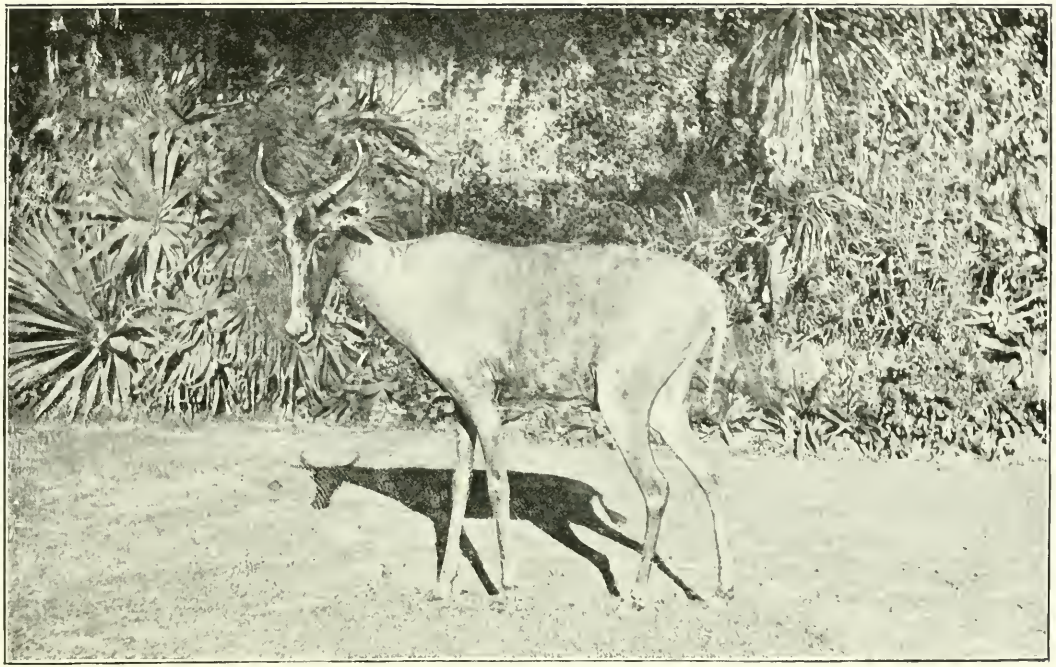
The Blesbok, moreover, in the future will command a good price from animal dealers for supplying Zoological Gardens in various parts of the world, and as Museum specimens. Owners of herds would, therefore, do well to take every care of them. The gradual extinction of a herd through inbreeding may be prevented by the introduction of males from other herds from time to time.

In former days, when the country was open and free, the Blesbok migrated across the Vaal south to the Karoo-veld in the winter, and back

again to the north in the summer in time for the calving, which occurred in October and November. The reason for this periodic migration was because the frosts of winter killed off the grass of the veld in the northern districts, thus depriving this animal of its food supply. On the contrary the highly nutritious herbage of the Karoo-veld flourishes during the winter time, and in the past afforded sustenance for hosts of herbivorous animals, the majority of which otherwise would have perished from starvation.

The Blesbok is a keenly observant animal, and its powers of scent are acute, and in consequence it is a most difficult creature to stalk. When disturbed it invariably retreats at a rapid, heavy canter up-wind, with its head held low and nose near the ground. The Blesbok averages 3 feet in height at the shoulders. The body is strongly built.

The only other antelope for which it can be mistaken is its very close relative, the Bontebok, which is similar in shape and size. The Blesbok, however, differs considerably from its relative in its colouration and markings. Its body colour is more reddish than that of the Bontebok, and lacks the dark blackish-purple gloss of the latter. The Bontebok is pure white on the under parts, which are sharply distinguished from the dark sides. The white extends between the hind-legs and forms a prominent white rump patch. The absence of these markings in the Blesbok distinguish it at once from the Bontebok.



A Sassaby cow. From Eastern Transvaal.

The horns are similar in shape to those of the Bontebok, but they are pale in colour and not black as in the latter animal.

The female is horned.

THE SASSABY OR BASTARD HARTEBEEST

(*Damaliscus lunatus*)

Tsessebe of Bechuanas (from whence the English name of Sassaby originated); Mzanzi of Zulus; Mzanci of Swazis; Incolomo of Matabele; Ingalowana of Basutos; Inkweko of Masubias; Inyundo of Makalakas; Kaboli of Barotse and Lake Ngami country; Luchu of Masaras; M'tengo in Chilala and Chibisa; Unchuru of Makubas.

The Sassaby inhabits South Africa eastwards through the north-eastern Transvaal and Portuguese East Africa south of the Zambesi. The Inkomati River, which is formed by the union of the Crocodile and Komati Rivers at the Transvaal-Portuguese boundary, appears to be the southern limit of the Sassaby, according to Major J. Stevenson-Hamilton. It extends westwards through Southern Rhodesia to the Zambesi.

The early travellers in South Africa record the Sassaby north of the Orange River in Bechuanaland. It is possible a few still linger in the more remote districts.

Beyond the Zambesi this antelope ranges northwards to British East Africa.

The Sassaby inhabits the open grassy veld and bush-veld, but does not frequent the dense jungle-like forests or hills.

They associate in troops of about a dozen individuals, but oftener in small parties of from three to six. Occasionally large herds are seen towards the close of the dry season.

Before the advent of the European hunter, the Sassaby roamed the plains in large herds of many hundreds, often in the company of the Zebra and Wildebeest.

The Sassaby is regarded as the fleetest and most enduring of all South African antelopes, and can easily outdistance even the best-mounted hunters. It usually moves off at first at an ungainly, lumbering canter like its cousin the Hartebeest, but when thoroughly scared its speed rivals that of the finest racehorse. Hunters often manage to get within gunshot of the Sassaby by concealing themselves and hoisting a piece of red rag on the end of a stick. This bit of cloth waving in the breeze excites the curiosity of these animals, which slowly approach to endeavour to solve the mystery. So confident is the animal in its powers of flight that it will often stand and stare at the hunter until he has approached sufficiently close for an easy and effective shot. The flesh of the Sassaby ranks high as venison.

The usual calving time is October, although calves are occasionally born in September and as late as December. The bulls fight fiercely, and the defeated

ones are driven into exile and attach themselves to troops of Zebras and Wildebeest.

There is some reason to believe that the Sassaby will interbreed with the Hartebeest.

The Sassaby is very similar in form and size to the Hartebeest, but is higher at the withers, sloping off considerably to the rump. An adult bull stands 4 feet 10 inches at the withers. The general colour is chocolate-brown and more or less shiny, varying with the degree and angle of the light rays. Dark, almost black patches are present on the face, which extend up between the horns. Similarly coloured broad stripes run down the outside of the fore-limbs nearly to the knees, where they form a ring; others are present on the haunches, extending down and round the limb at the hocks.

The calves are pale chestnut or bright yellowish-red in colour.

The female Sassaby is horned.

THE BLACK WILDEBEEST OR WHITE-TAILED GNU

(*Connochætes gnu*)

Inkankone of Zulus; Inxu of Amaxosa; T'gnu of Hottentots.

This antelope was originally known as the Gnu, and to distinguish it from the other species it was termed the White-tailed Gnu, owing to its long white tail. The word Gnu is from the Hottentot name

of the animal, viz. T'gnu, given in imitation of the bellowing snort of the old bulls. This Gnu was subsequently called the Zwart Wildebeest by the Dutch Voortrekkers, which means Black Wild Beast, or more correctly the Black Wild Ox. The word Wildebeest is pronounced Vil-de-beast.

The Black Wildebeest in former days inhabited the Karoo of the Cape, high-veld of the Orange Free State, and the southern half of the Transvaal, in herds of from a dozen to fifty and even more. Early writers describe them as existing in immense numbers, the veld being covered with herds of them as far as the horizon, peacefully grazing in the company of the Wild Ostrich and Zebra. The inevitable result of the advance of civilisation was the wholesale destruction of these great herds of Wildebeest, and to-day this wonderfully interesting animal is extinct in the wild or feral condition, except perhaps in South-West Africa, where a few may still survive.

Some of the progressive farmers in the Orange Free State and Transvaal preserved small herds on their farms. Owing to the long-continued in-breeding most of the herds were diminishing in numbers. When the late South African War began it was the general opinion that the big game would be practically exterminated in those districts which were the seats of Military Operations. However, it proved to be the very reverse, for, owing to the destruction of fences, the Wildebeest, Blesbok and Springbok broke loose and spread over the country,

A pair of Black Wildebeest or White-tailed Gnu.

This singular-looking antelope with a body like that of a horse and a head like that of an ox, formerly roamed in countless thousands on the open plains of South Africa.

comparatively few falling victims to Boer or Briton. By the time the war was ended the various herds had interbred so freely that the danger was averted—of deterioration and gradual extinction due to in-breeding—which threatened the isolated herds on farms remote from each other. From enquiries recently made it is apparent that the Black Wildebeest has been increasing rapidly in numbers, and bids fair to become one of the domestic food animals of man.

Every season the herds are thinned out, the meat commanding a good price as venison, or in the form of biltong.

An animal dealer of my acquaintance has for some years been in the habit of shipping Black Wildebeest to various over-sea Zoological Gardens.

A Voortrekker friend who passed most of his days in fighting the savage native hordes, and in hunting lions and various other wild animals, used to relate to me his experiences, and said in the early days the plains were teeming with game animals of various species. He and his friends made a business of collecting the hides of large antelopes, trekked to the nearest trading-station and bartered them for groceries, clothing and other requirements. He related that on one occasion he and his friends penetrated a district where the Wildebeest had hitherto been unmolested, and so unsuspicious were they that sufficient of them were killed to load up five wagons with their hides. The horns at that time

were considered to be valueless, and were left upon the veld.

Fifteen years ago in Natal good pairs of horns were in great demand at £10 per pair. At the present time they are selling at £1 10*s*. to £2.

The Black Wildebeest is noted for its great speed, powers of endurance and tenacity to life.

When brought to bay by dogs they fight fiercely, and use the sharp upturned points of their horns to great advantage.

In captivity the males are very pugnacious, and furiously attack any man or animal that might intrude into their paddocks. Instances are on record of men being thus gored to death.

On the advent of the breeding season the males fight viciously with one another. In fact, when not feeding or resting, they are nearly always either sparring with each other or prodding the ground with their upturned horns.

The calves are born usually in December after a gestation period of eight to eight and a half months. Although the calf begins to nibble grass and Karoo-bush when a week old, the mother continues to suckle it for seven or eight months.

In the early days before these animals had learned by bitter experience to regard man as a dangerous enemy, they showed great curiosity, and acted in a most extraordinary way when he approached. One or even several herds would gallop and charge, wheel about, caper, whisk their tails, paw the ground, butt

with each other and perform the most remarkable evolutions around the intruder at a greater or lesser distance. Gordon Cumming fully describes these curious antics in his book.

In common with most other large South African antelopes, the Wildebeest is attacked by the Bot-fly, and is victimised in the same manner as the Cape Hartebeest in the way already described. The Black Wildebeest is a curious-looking beast with a head resembling that of a cow, a horse-like body, and the feet of an antelope.

The height of an adult male at the shoulder is 3 feet 6 inches to 4 feet. The general colour of the hair is deep umber-brown or rich chocolate-brown, passing into black. An upright, stiff mane is present along the ridge of the neck; an upwardly directed patch of black hair stands on the face; a bigger patch grows from the chin and throat, and a third between the fore-legs. The tail is horselike, the long hairs being abundant, long and white. The female is smaller than the male and is horned, but, like the horns of the females of other species of antelopes, they are not so robust as those of the male.

The mammæ, like those of the domestic cow, are four in number. The eyes are wild and fierce-looking, and in size and shape resemble those of an ox, and are surrounded with long white bristles which also occur upon the nostrils.

THE BLUE WILDEBEEST OR BRINDLED GNU

(*Connochætes taurinus*)

Kaop (which means Baas or master) of Namaquas and Hottentots; Kokoon of Bechuanas; Inkōne-kōne of Swazis, Zulus and Matabele; Ikokoni of Basutos; Ee-vumba of Makalakas; Kokong of Barotse and Batoka tribes; Minyumbwi of Batongas; Numbo of Masubias; Nyamba of the Chilala and Chisenga; Unzozo of the Makubas.

The Blue Wildebeest, Blaauw or Bastard Wildebeest of the Dutch colonists, inhabits South Africa from the South-West across to Portuguese East Africa and the Zambesi. It extends as far south as the low country of the Eastern Transvaal and the Malopo River on the west. North of the Zambesi it is common as far as the Equator.

In former times the Blue Wildebeest was plentiful all over South Africa, from the vicinity of the Orange River to the Zambesi. It was to be seen in troops of from a dozen to about sixty individuals on the plains and bush-veld, but never in broken, rocky country or amongst the hills. Like its relative, the Black Wildebeest, it is a grass-eating antelope of the plains.

Owing to being hunted so relentlessly by man, these antelopes are retiring to the more wooded districts to escape his attacks.

In secluded districts they are usually found in the open, grassy country interspersed with patches

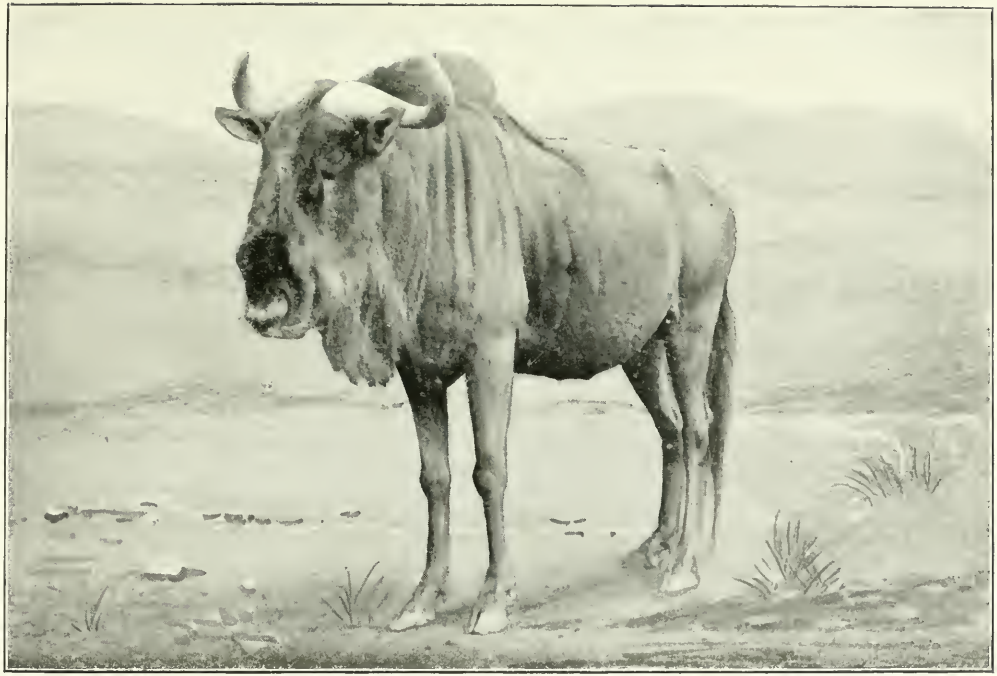


Photo. W. S. Berridge, F.Z.S.

The Blue Wildebeest or Brindled Gnu which formerly roamed the vast plains of South Africa in large herds.

of mimosa and other bush, where they seek shelter from the heat of the midday sun.

Sometimes the herd retire to rest and ruminate out in the centre of the veld, where there is a good view for a long distance. At these times one of the herd, usually an old cow, does sentry-go.

This antelope, although so clumsy-looking, is exceedingly swift when fleeing from an enemy, and never seems to tire. Even with a broken leg or a bullet in its body, it will succeed in outdistancing and running right away from a well-mounted hunter.

During the winter season the adult bulls are often found in troops apart from the cows and immature animals.

It is useless for a hunter to pursue a troop of these animals with the object of overtaking them. The troop can often be turned and headed in a contrary direction by firing over their heads so that the bullet will raise up the sand or dust in front of them, and in this manner they are often brought within range of the hunter's rifle.

It is at the best of times dreadfully tough and fatiguing work hunting this wary antelope.

When wounded and brought to bay the Wildebeest should be approached with caution by the dismounted sportsman, for, as likely as not, the apparently dying animal will rise and make a sudden charge, and use its horns with terrible effect.

Nearly all the African antelopes are noted for

their endurance and great tenacity of life. The Blue Wildebeest is not lacking in this respect, indeed it possesses a larger share of vitality than many of the others, for all hunters agree that even when seriously wounded it will succeed in escaping even from a well-mounted man.

These animals feed principally at night, and are ever on the alert against their arch enemy, the Lion. So long as there is sufficient pasturage and water, and provided they are not persecuted, a herd will remain in the same locality and not attempt to wander off. The feeding grounds of each herd seem to be carefully marked off; and any encroachment of one herd on the domain of another is strongly resented. In this connection Major J. Stevenson-Hamilton in his *Animal Life in Africa* says: "Any infringement of the grazing rights appears to be strongly resented; and I was once witness of a most remarkable episode when the herd bull of a certain troop chased a party of invaders back on to their own ground on the other side of a small stream, returning quietly to his own party as soon as his duty was done. Not the least remarkable phase of the incident was the sense of wrong-doing exhibited by the trespassers, who displayed not the smallest tendency to offer any resistance."

These antelopes are very swift and hardy as well as courageous. Like some other species of the larger antelopes, they often fall victims to the hunter's rifle by pausing during their flight to gaze at him.

When fleeing from an enemy they often gallop almost in a line at a very rapid pace, the females leading and the adult males in the rear.

Burchell's Zebras are often seen grazing with herds of Blue Wildebeest, and seem to be on the friendliest terms with them.

Old males which have been driven out of the herd by their younger rivals are sometimes met with alone, but more usually they attach themselves to herds of Sassaby, Waterbuck, Zebra and Impala.

The Blue Wildebeest is not so full of life, frolic and dash as is its cousin the Black Wildebeest, and is somewhat clumsy and stolid, but nevertheless when brought to bay it puts up a good fight.

There are considerable numbers of these animals in the Transvaal Game Reserve, where they breed freely. The calving occurs from September to the end of December. The calves bleat very much like the calvesof domesticcattle,and untilsufficiently strong and fleet to join the herd, they are kept concealed in thick bush or long grass, and carefully watched over by their mothers.

The gestation period is from eight to nine months.

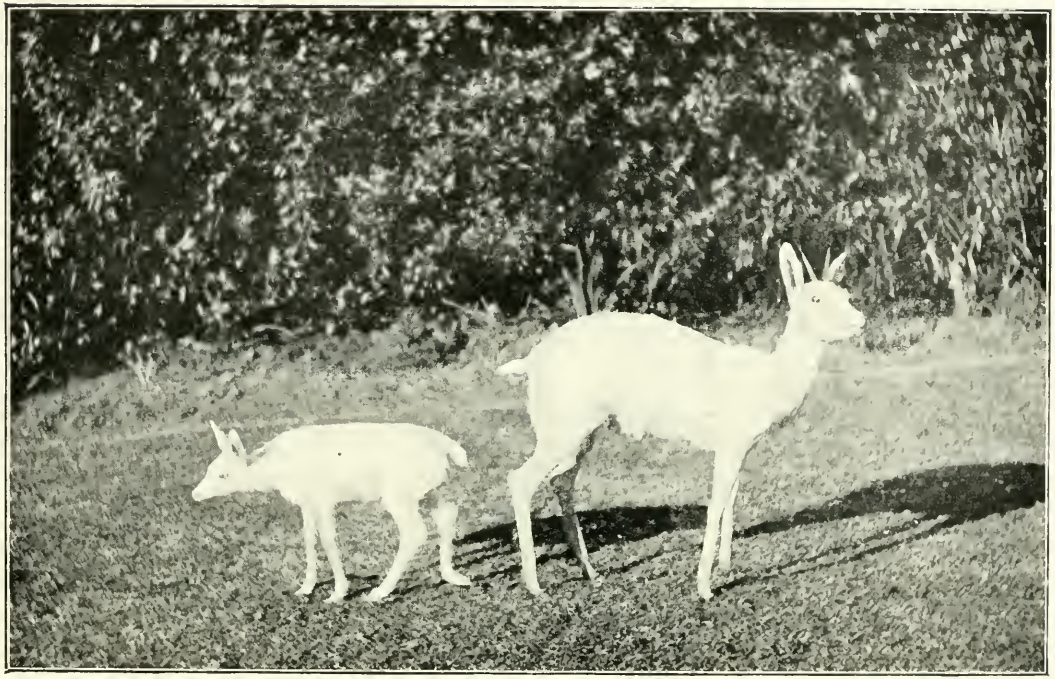
The flesh of this antelope is coarse, hard and dry; but it makes fairly good biltong.

The average height of the Blue Wildebeest is 4 feet 3 inches at the shoulder. It is bulkier than the other species and more ox-like. The general colour is dark bluish-drab with a silvery sheen, and indistinct traces of brown transverse bands on the

sides of the body. The nose is somewhat curved, and the face and tail are black.

The female is horned and resembles the male, but has a more slender neck, and is less robust in appearance.

The neck of this Wildebeest is not arched as with the Black species. The head is large and buffalo-like, and seems quite out of proportion to the body of the animal.



Albino Cape Duiker. Ram and a fawn, from Centlivres and Alexandria in the Cape Province.

THE CAPE DUIKER

(*Cephalophus grimmi*)

Impunzi of the Zulus, Swazis, Amaxosa and Matabele; Iputi of Basuto; Puti of Bechuanas; Pembgee of Makalakas; Unsa of Masubias; Gwapi of Chinyanjas; Nagi of M'Kua; Gudda of Hausas; Mpewo of Wagandas.

Duiker is a South African Dutch word which means diver. It is generally known in South Africa as the Duikerbok or Diving buck or goat. The name Duiker is also applied to the Cormorant, which is a diving sea bird.

The Duikerbok or Cape Duiker is one of the best known of all the African antelopes. It inhabits all the provinces of South Africa, and is common north of the Zambesi to Somaliland on the east, and Angola on the west.

The Cape Duiker inhabits the open country covered with scattered bush such as the bush-veld. It is seldom found far from patches of bush into which it at once retreats when alarmed.

This antelope feeds during the evening and early morning on leaves, wild berries, fruits, young shoots and tender grass. In secluded localities it is sometimes seen abroad on cloudy days, the late afternoon and early morning.

During the daytime the Duiker rests, as a rule, in thick cover, but sometimes lies under a small shrub beneath the shelter of a jutting boulder, or in long grass. It lies in its form as close as a hare, and usually does not break cover until it realises it has been discovered; whereupon it dashes off at a great pace heading for the nearest cover. Every few strides it springs into the air in order to ascertain the nature of the enemy and his intentions. On gaining the bush after a final spring or two to locate the foe, it disappears or dives into the foliage, and after turning to either right or left, pursues a zig-zag course without a pause until it is satisfied it has baffled the enemy.

When thoroughly scared, the Duiker travels several miles at a rapid pace. In many localities the scrub grows in large isolated patches, and when hunted out of one patch, it flees to a neighbouring one and conceals itself therein.

In Natal I frequently startled Duikers from their "form," under isolated bushes, or in long grass in valleys where there was no bushy cover for miles. In these instances the animals made off across the hilly, grass-covered country, and could be watched with a field-glass for a considerable time.

The Duiker buck is incessantly hunted both by Europeans and natives; but, because it never pauses like most other antelopes to look round, and by reason of its baffling flight through the bush or long grass, its species is still common.

When hunting the Cape Duiker in Natal, a party of natives and dogs are usually got together. These natives are employed as beaters, and the sportsmen, who are mounted, take up convenient positions on the opposite side of the patch of bush the natives are beating, and shoot the bucks when they break cover.

These hunts are often organised by the farmers for the purpose of reducing the numbers of Duikers because of their destructiveness. Several farmer friends of mine were obliged to organise hunts every season to rid their neighbourhood of these animals, which issue forth during the hours of darkness and eat off the tender young plants.

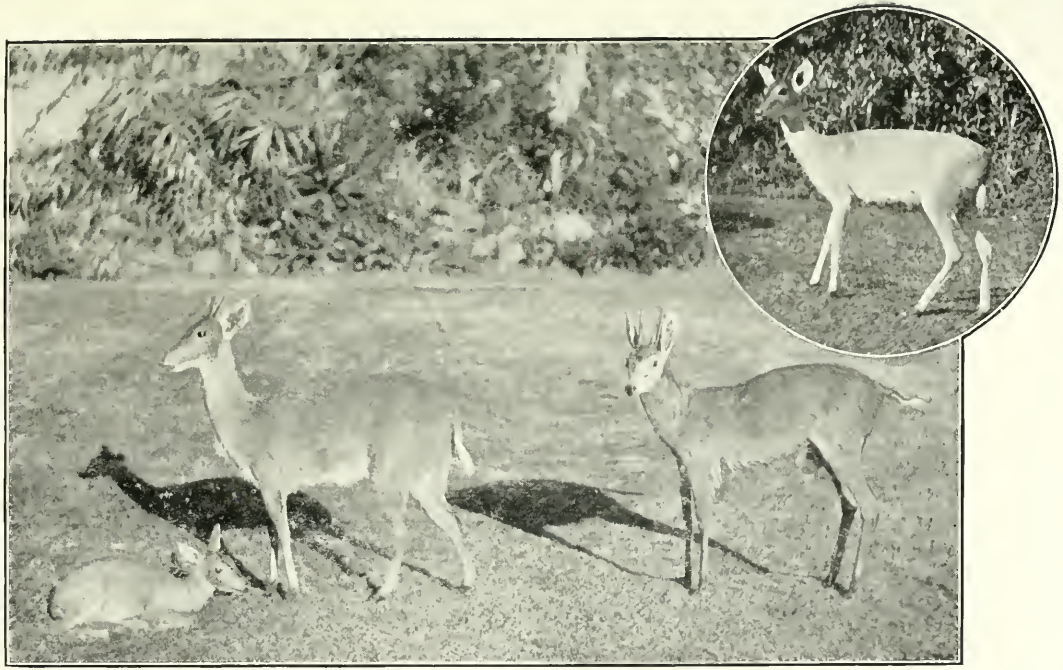
A farmer friend in Natal, thinking he had destroyed or frightened off all the Duikers in his vicinity, planted a ten-acre field with beans. In two nights the entire field of young beans had vanished into the paunches of the Duikers.

No ordinary fence of wires will keep them out, for they are adepts at jumping and squeezing through small spaces.

Duikers do not usually eat grass, but after the veld has been burned and the young tender grass is shooting up, they feed freely upon it. Duikers having become a pest on a neighbour's estate, we managed to lure them to their doom through their curiosity. A hole was dug, and a shrub placed at one side on the surface of the ground. Immediately in front of this bush an acetylene bicycle lamp

was placed. Seeing the strong light, the Duikers from the bush-covered neighbourhood gradually approached, and the moment one appeared in the glare cast by the lamp, it was shot. It was useless attempting this stratagem twice during the same evening at the same spot.

In the eastern parts of South Africa this buck is the favourite food of the python (*Python sebæ*). After constricting an adult Duiker, a 16-foot python can swallow its victim with ease. Sometimes the hindquarters are swallowed first, and the horns get wedged in the throat of the snake and perforate the flesh and skin of the neck. When this occurs in the neck region, the snake usually dies; but if the victim has been swallowed into the stomach of the reptile, and the horns should perforate the flesh and skin, they work their way right out and fall off after the skull has been dissolved by the snake's powerful digestive juices. In Natal I came across several instances of such perforations. It seems almost incredible that a python can swallow an adult Duiker hind-parts first, and succeed in working its jaws over its sharp, pointed horns when they are reversed, but nevertheless it is true. Hearing a Duiker screaming in mortal terror, I hastened through the bush on a hillside in Natal, and in an open space came upon a python endeavouring to kill it by constriction. The python was rather small for the job, but fought most gamely. Giving the reptile a kick with my boot, it swiftly uncoiled



Cape Duikers. The one on the right is a very old ram with a white face. On the left—a horned ewe and fawn. Horned ewes are uncommon. The inset is a normal hornless ewe. The colour of the Duiker blends beautifully with its natural environment.

and glided away amongst the boulders. The buck was so badly crippled that I was obliged to kill it.

A friend kept a number of Duikers in a large enclosure, and they bred quite freely. The males, however, on the approach of the mating season fought fiercely, and attacked the children when they approached the wire mesh of the enclosure.

When captured young, the Duiker can easily be reared on milk, which it will readily take from a sucking-bottle. They grow up as tame as any domestic dog, and are overflowing with frolic and fun. On reaching adult life they are apt to wander off in search of a mate. At first their excursions are short and their return is regular, but after a time the "call of the veld" is too great for them, and they cease to return. Missing my tame half-grown Duiker one day, I made diligent search for her amidst some adjacent scrub. My terrier dogs presently gave tongue, and on approaching to ascertain the cause found a python at bay. It presently began to heave and ejected a sausage-shaped mass which, on inspection, proved to be my Duiker.

The Duiker is a solitary antelope, except at the breeding time, when a pair may be seen in company. Several may occasionally be observed browsing together in some favourite locality, but each betakes itself afterwards to its solitary lair. The Duiker breeds all the year round, but most freely during the early spring and summer months. The lambs

when very young can easily be run down by average dogs, and even terriers can overtake them. The mother will often stand at bay and endeavour to protect her lamb when it is attacked by dogs.

One lamb is usually born at a time, but occasionally twins are seen. The period of gestation is about four months.

This antelope drinks freely when water is obtainable, but can live without inconvenience when entirely deprived of water. In the wild condition, for instance, it inhabits districts in the Kalahari where water is unobtainable.

The female is, as a general rule, hornless; but it is by no means rare to find horned females.

The Cape Duiker is about 26 inches in height at the shoulder, and slightly higher at the croup. Its weight is about 30 lbs.

In colour it is yellowish-grey or speckled yellow-brown, which varies considerably in shade in the different individuals. There are no dark markings on the body except a dark-brown streak on the nose, which often extends from the nostrils to the base of the horns. The top of the head and forehead is rufous, and the abdomen white.

The flesh is poor in quality, and requires to be "hung" until stale.

THE RED DUIKER

(*Cephalophus natalensis*)

Mkumbi of Zulus; Msumbi of Swazis and Matonga; Isikupu of Basutos; Chisimbi of the lower Zambesi natives.

The Red Duiker, otherwise known as the Rooi-Boschbokje (Little Red Bushbuck), inhabits the dense bush, thickly-wooded kloofs and tree-fringed banks of rivers from Pondoland, coastwards through Natal, Swaziland, Eastern Transvaal, Rhodesia, and the forest and scrub-covered country of the East Coast as far as Zanzibar. The Red Duiker is found in greatest abundance in the dense forest belts which fringe the eastern coast. In Natal I have never met with it in the inland districts.

It is solitary by habit, but a pair may be seen now and then together. I have on many occasions surprised several browsing in company in the forest glades during the early evening. Occasionally these Duikers venture forth and nibble the young crops in cultivated fields in close proximity to their bushy homes. They do not venture abroad by day except just after sunrise and before sunset. During rainy weather, or when the sky is very overcast, they sometimes are seen on the move. Their food consists of tender shoots, leaves, wild berries and fruits.

This Duiker is never found in dry districts where there is no permanent supply of water. It rests

during the day in a cosy lair in the midst of a mass of dense, tangled, or creeper-covered scrub, and when startled, makes rapid rushes through the bush, meanwhile emitting a peculiar sniffling sound. Its cry, which is not often uttered, is a sharp whistle, but when caught by dogs or wounded and overtaken, its cry of terror is deep and rough, quite unlike the shrill, terrified scream of the Cape Duiker.

The Red Duiker produces one lamb at a birth, which is lighter in colour than the adult; on rare occasions twins are born.

The young are born principally during the early summer, viz. October and November.

The chief enemy of this Duiker is the Python Snake, which levies a heavy toll upon it. The Python lies in ambush for it along a branch overhanging one of its beaten tracks through the forest, or hidden in the scrub on the ground. This crafty snake often submerges itself in the water at one of the favourite drinking places of this handsome little antelope, its nostrils alone being above water. When the unsuspecting buck is drinking, the snake seizes its nose or one of its fore-legs with its jaws, which are armed with sharp re-curved teeth, and with lightning rapidity its coils are around its victim. The Leopard, Serval and Ratel also prey upon this antelope. Eagles occasionally succeed in pouncing upon them in the early mornings.

The Red Duiker thrives in captivity, and is exceed-

ingly hardy and tenacious of life. Its flesh is very palatable when properly prepared.

The Red Duiker is smaller than the Cape Duiker, the ram being only $1\frac{1}{2}$ feet at most in height at the shoulder, and the ewe 19 inches. It can be distinguished from all other South African antelopes by its foxy-red or rufous colour, which is richest on the back. It stands an inch higher at the croup than at the shoulder. Weight of an average adult ram 26 to 28 lbs.; ewe 28 to 31 lbs. Both sexes are horned.

There are several local races of Red Duikers which differ slightly from the type in colour and markings. There are two of these local races in South Africa, viz. *Cephalophus natalensis amœnus*, and *Cephalophus natalensis robertsi*.

The latter is an inhabitant of Portuguese East Africa. Having been discovered south of the Zambesi, it is included in the South African fauna.

It was described as a distinct species by the Hon. Walter Rothschild in the *P.Z.S.*, 1906, p. 691, as follows:

"This is nearest to *C. harveyi*, *C. castaneus*, *C. callipygus*, and *C. natalensis*, but differs from them all by being quite uniform in colour, the orange-chestnut being much paler, yellower, and brighter. Colour of body, legs and head orange-chestnut or pale Chinese orange. Occiput, outside of ears, and a large patch above the nostrils ash or mouse-grey. Chest and inner side of fore-legs

above knees more whitish. Crest between horns and on forehead dark rufous and very long and thick. Horns long, basal third ringed and rugose; much slenderer than in the four allied forms."

Length of horns 80 mm.

Habitat. Portuguese East Africa (Roberts' Collection).

In 1907, Dr. Trouessart described his *Cephalophus natalensis vassei* from Portuguese East Africa. Mr. Wroughton, however, in 1911, showed that *vassei* and *robertsi* were identical, and that the animal described by Rothschild and Trouessart was only a sub-species of *C. natalensis*.

THE BLUE DUIKER

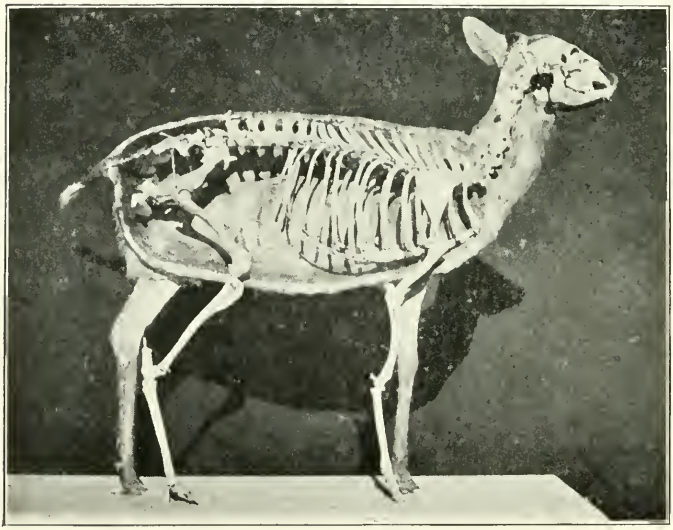
(*Cephalophus monticola*)

Ipiti of the Zulu tribes; Iputi of Amaxosa; Noumetje or Gnometie of the Hottentots.

The Blue Duiker is known to the Natal colonists by the Zulu name of Ipiti, which is pronounced Peté, and to the Dutch colonists as the Blaauwbok or Kleenebok.

The Blue Duiker inhabits the bush-covered portions of the country from about the district of George in the Cape Province, eastwards to Zululand. Local races or closely allied forms extend through the forest regions of the greater part of equatorial Africa.

A pair of Blue Duikers with fawn.
This little Duiker or "Ipiti" is an inhabitant of the dense scrubby woodlands.



Cape Duiker ewe half-skeletonised.

From a specimen in the Port Elizabeth Museum.

THE BLUE DUIKER

The Blue Duiker is the smallest of the South African antelopes, being about the same size and weight as a large hare. The average height of an adult at the shoulder is 13 inches. The ewe is slightly larger than the ram.

This pygmy buck inhabits the thick bush-lands and dense scrub, where it has regular beaten tracks along which it runs with great swiftness.

Although this little Duiker is commonest in the forest belts along the coast, it is, nevertheless, abundant in the more inland districts. I have met with it in all the bush-covered parts of Natal. It does not keep exclusively to the dense scrub and forests; it sometimes wanders into long grass interspersed with isolated patches of scrub.

When not periodically burned, the rank grass mats itself together, and beneath this cover the Blue Duikers have innumerable tracks from which they can be dislodged with fox-terrier dogs.

These Duikers will not break cover unless absolutely compelled as a last resource, and when they do they race with great speed for the nearest patch of scrub or long grass. When hunted and hard pressed in isolated patches of bush, they crouch low upon the ground and lie very close.

In Natal they are usually driven out of their bushy cover by native beaters with dogs. So rapid in their movements and so secretive are they that, although the beaters may be armed with assegais and kerries, and only a few yards apart, these nimble

little creatures usually succeed in doubling back and darting through the line of enemies unscathed. They are very tenacious of life, and keep on running after receiving frightful injuries.

The natives of Natal and Zululand, with a number of mongrel dogs, hunt these little animals in and out of season, but, in spite of constant persecution by man, and its natural enemies the Python, Jackal and Wild Cat tribe, it continues to hold its own.

In the dense belts of bush along the coast on the eastern side of the Cape Province this Duiker is quite common. It is regularly hunted in the vicinity of Port Elizabeth with but little success, owing to the denseness and extent of the scrub which it inhabits.

In the Port Elizabeth Museum an albino was obtained locally, and also another which has the lower portions of both of its back legs white.

The Blue Duiker rests at night and is active during the daytime. Its food consists of leaves, shoots, berries and wild fruits. I have observed it nibbling tender spring grass. It does not venture into cultivated lands, which would expose it to the attacks of eagles, dogs and men. It confines its wanderings from cover to the secluded forest glades, and the fringes of its bushy home. When travelling along roads through forest lands, a Blue Duiker may occasionally be observed flitting across from one side to the other, but so rapid are its movements that the observer is only conscious of a moving, bluish-brown, indistinct streak.

Slip-knot snares placed in their runs are often employed by natives to strangle these antelopes.

The Blue Duiker drinks usually once a day in the evening, but often more frequently during excessively hot weather.

One fawn is produced at a birth.

These antelopes usually associate in pairs, but several may at times be observed feeding together on the fringe of the forest, or in the glades.

The young are stated to be born during the months of September and October. There is, however, no definite period of the year during which the young are born in all parts of their habitat. In Natal I have captured week-old fawns; and on dissection of adult females have found embryos during the winter months, and in the spring and summer. In the eastern portion of the Cape Province the Blue Duikers breed more freely in winter than in summer. In the up-country districts they breed, principally, during the spring and summer seasons.

The Blue Duiker is wonderfully alert, and possesses the senses of sight, hearing and scent in a high degree of perfection. These, with its diminutive size and inconspicuous colour, enable it to hold its own against its many enemies. Here we have an excellent example of the results of the incessant struggle for the survival of the fittest which is going on with all forms of life, from the lowest form of vegetable, to and including our species.

As the result of this struggle, the Blue Duiker has evolved senses and mental faculties which otherwise would never have developed. Moreover, finding their prey becoming increasingly hard to secure, the enemies of the Blue Duiker are obliged to exert their various faculties and senses to the uttermost or die of starvation. I am inclined to believe there exists some sort of compact between the Bushbuck (*Tragelaphus scriptus*) and the little Blue Duiker. I have often noticed the latter antelope emerge from the fringe of a thicket during the early morning or at sundown, and after a few minutes a Bushbuck ram would appear and begin browsing without the usual preliminary interval of listening and scrutiny of the neighbourhood. It would seem the Blue Duiker, in these instances, deliberately precedes the Bushbuck, and that the latter follows, confident in the superior senses of his little friend, which he probably protects against the attacks of many of its foes such as the Caracal, Serval, Honey Ratel and Jackal.

The Blue Duiker lives and thrives in captivity, and will breed freely enough if kept in a large enclosure in which there is a patch or two of scrub. It is, however, not so easily tamed as the Cape Duiker, owing to its excessively timid nature.

Their cry of alarm is a sharp, whistling snort.

The general colour of this pygmy antelope is dark greyish-brown with a tinge of blue, which varies in intensity in different individuals according to

Albino Blue Duiker or "Ipiti." From Bushy Park, near Port Elizabeth.

age, sex and environment. The under parts of the body, as well as the inside of the legs, are white; the face and forehead are dark brown, bordered by a rufus-brown line on either side; the legs are rufous-brown.

Both sexes are horned. The horns are barely visible above the long tuft of hair which separates them.

Their flesh is considered very palatable.

Another species of pygmy Duiker belonging to the same group as the little Blue Duiker inhabits Mozambique; and having been found south of the Zambesi it is included in the South African fauna. It has rufous-coloured legs, as is the case with its southern cousin, but differs in some other respects. It is mentioned by Dr. Matschie in *S.B. Ges. nat. Fr.*, 1897, p. 158.

THE KLIPSPRINGER

(*Oreotragus oreotragus*)

Syn. : *Orcotragus saltator*

Kainsi of Hottentots; Ikoko of Amaxosa; 'Ligoka of Swazi; Ikumi of Basuto; Ee-go-go of Matabele; Ingululu of Makalakas; Kululu of Masaras; Alakud of Somalis; Sassa of Abyssinia.

The Klipspringer or Klip-bok inhabits the rocky tops of the mountain ranges, hills, boulder-strewn broken ground, and isolated bush-covered kops from the coastal districts of the Cape Province throughout South Africa to the Zambesi, and north as far as Somaliland and Abyssinia.

In the absence of rocky hills, the Klipspringer takes to the rock-strewn dry river-beds, which are so common in what is known as the "low country."

When disturbed in these retreats they make off up or down the river-bed, springing from boulder to boulder so rapidly that they are quickly lost to view.

The Klipspringer, which is a South African Dutch term meaning Rock Jumper, is regarded as the Chamois of Africa.

These unique little antelopes are marvellously sure-footed, nimble and enduring. They associate in pairs, and in small troops of three to eight, and

A pair of Klipspringers captured on the Van Staadens heights near Port Elizabeth.

feed upon the scanty herbage which struggles for existence in their rocky retreats. When this is insufficient for their needs, they descend during the evening to the foot of their rocky fastnesses to feed upon the vegetation on the slopes and to slake their thirst.

Klipspringers often inhabit rocky hills and kops many miles from water, and in these situations the dew-laden herbage serves them as both food and drink. When showers fall, water usually collects in hollows and crannies in the rocks, and these supply the Klipspringer for a time with water. Sometimes in these waterless districts a prolonged drought occurs which shrivels up the vegetation to such an extent that it lacks a sufficiency of water to supply the bodily needs of this hardy little antelope, and it is, in consequence, forced to abandon its rocky castle and brave the dangers of a migration to a more favoured locality. In this way Klipspringers often appear in a locality where they have not been known to exist for years.

In localities where the Klipspringers are not persecuted, they may be seen at almost any time of the day feeding, frolicking, or resting beneath or on the sides of their rocky home.

When surprised at the foot of their rocky fastnesses they, with elevated head, bound off with the most astounding daring and agility, leaping like animated rubber balls from boulder to boulder, and from one pinnacle of rock to another. Poising with

all four hoofs on a point of rock an inch or two square, this wonderful little animal launches itself into space to a similar point of rock. Balancing for an instant on a projection of rock on the very edge of a vast krantz, the nimble little creature bounds off from ledge to ledge and point to point in a manner impossible to describe. That an animal with hard cloven hoofs is able to traverse these precipitous hills, abounding in chasms into which the slightest slip of a foot would launch them, is almost beyond belief. In agility and surefootedness amongst the rocky fastnesses which are their home, they equal the famous Chamois of Switzerland.

The hoofs of the Klipspringer are nearly rectangular in shape, with a narrow sole, and are on a line with the legs, making them excellently adapted for balancing the body on points of rock.

The hair of the Klipspringer is very thick and spine-like, and altogether unlike that of any other African antelope; and owing to its elasticity is eminently adapted to act as a buffer should the animal collide with a rock or accidentally fall, which it, at times, is sure to do, notwithstanding its expertness and agility in jumping and balancing.

This hair is in great request for stuffing saddle pannels. The bristle-like hair is so loosely attached to the skin of the Klipspringer that if a dead specimen is carelessly skinned it will come out in handfuls. To preserve the hair in all its beauty the carcase must be carefully skinned when quite fresh, and the

skin thoroughly salted if subsequently required for mounting. If needed for the preparation of a "flat" skin, then it should either be soaked in a strong solution of alum for a few hours, or powdered burnt alum rubbed into the fleshy side of the skin.

It is hopeless endeavouring to chase Klipspringers in this natural, rocky environment, but on level ground they can easily be overtaken by dogs. In captivity they become tame and docile, but do not live long unless they are kept in an enclosure containing a rocky hillock on which they can jump and frolic. The unnatural way in which wild animals are confined in many Zoological Gardens is positively barbarous. I have seen the dauntless little Klipspringer intended by Nature for a wild, free life in some rocky fastness, confined in a small, flat enclosure with no chance of working off its superabundant energy and vitality.

Klipspringers are still fairly common in the district of Uitenhage and neighbouring districts, and are carefully preserved by several progressive citizens of Port Elizabeth who have country estates. They are also abundant on Government lands.

This antelope can easily be shot with a modern rifle, as it presents an easy mark for a bullet when posed immovable upon a pinnacle of rock with all four feet gathered together.

The call or cry is a thin whistle, somewhat like that given out by a child's flute.

Their principal enemies are the Leopard, Cerval

and Python. Eagles swoop down and carry off the fawns when chance offers.

Klipspringers, during the heat of the day, seek the shade afforded by rock crevices, or the cool shade of some deep kloof, or the bush which invariably grows at the foot of their rocky, elevated homes. When disturbed in these situations they instantly spring off and away up the hillside.

Their strength, vitality and energy is astonishing, for, without any apparent effort, a Klipspringer will bound up the face of a hill covered with smooth, slippery rocks, and so steep that no animal other than a Baboon could possibly find a foothold. The latter animal has hands and feet specially adapted for gripping the smallest projection of rock, but the Klipspringer has no such aids, which makes its performances amongst the crags and krantzes so marvellous. Kirby witnessed a Klipspringer leap from the edge of a krantz to a jutting ledge below, a distance of about 30 feet, at a single leap, and, steadying itself for a moment, it ran at a rapid pace obliquely down a precipice.

The Klipspringers which inhabit Van Staadens heights near Port Elizabeth breed from July to October. They inhabit the most elevated and rugged cliffs in the neighbourhood, and come out of their resting-places during the late afternoon and early evening and descend to drink and feed in the valleys. The instant a man or dog appears they bound away and up to their elevated retreats.

Selous mentions having seen a fawn during the month of August which appeared to be about a month old at the time.

The Klipspringer is a thick-set little antelope averaging 22 inches in height at the shoulder. The body is covered with bristle-like hair, and each hair is hollow and flattened in section. It lies thick and compactly on the body, but is nevertheless light and cool owing to its nature. The hair is pale grey at the base, brown in the middle and yellow at the tip, imparting a speckled yellow and brown effect.

The females are hornless.

THE CAPE ORIBI

(*Ourebia ourebi*)

Ourebi, Ourebikje and Bleekbok of the Colonists; Iula of Zulus, Swazis, Amaxosa and Matonga; Pulukudukamani of Basuto.

The Cape Oribi inhabits the eastern side of South Africa from the south-eastern portions of the Cape Province through Basutoland, Natal, Zululand, Orange Free State, Eastern Transvaal and the low country of Rhodesia, and west to Bechuanaland, and east to Portuguese East Africa. North of the Zambesi its range extends to British Central Africa, where it is replaced by Peters' Oribi (*Ourebia hastata*).

The Oribi inhabits the open, treeless, grassy veld, bush-veld, low foot-hills, and even the flat tops of mountain ranges.

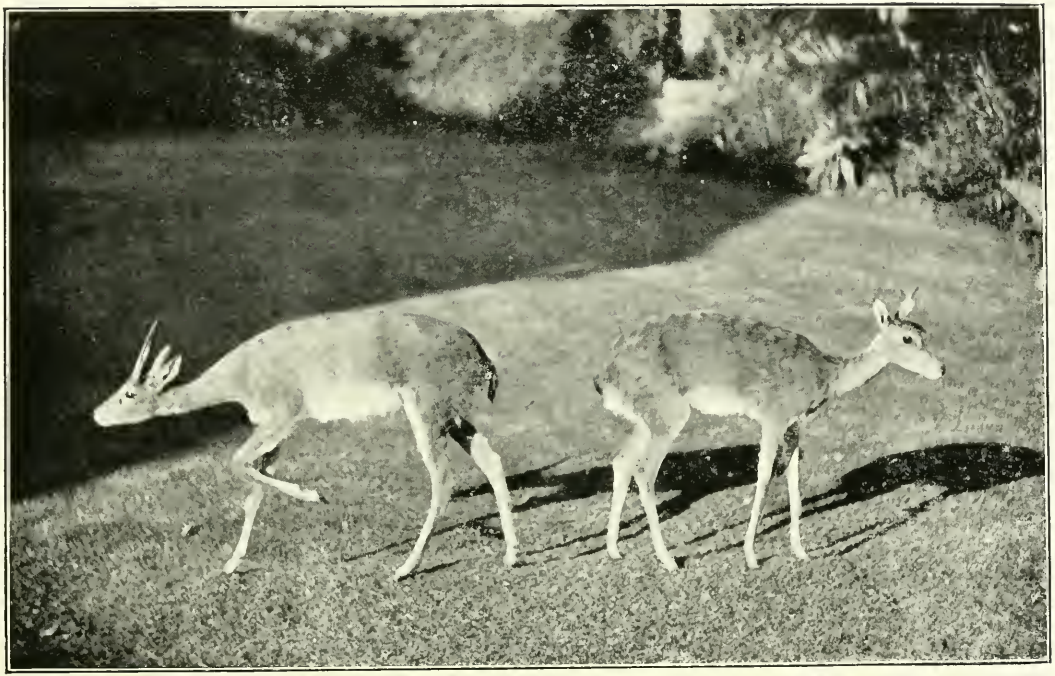
They associate in pairs or in small parties of four or five, which, on being disturbed, make off either in pairs, or a pair and the last fawn.

When pursued the Cape Oribi races away at a very rapid pace for thirty or forty yards, and then begins a series of springs into the air, alighting each time on the hind-feet first. This manœuvre is for the purpose of getting a general view of the surroundings, and the nature and exact locality of the foe. If the Oribi sees any one at a distance approaching, it will usually lie down, trusting to its resemblance to its surroundings to escape observation. Advantage is taken by the hunter of this habit, and by manœuvring around them and gradually diminishing the distance, he is able to approach within easy rifle range. At other times they are hunted on horseback, and the moment one starts from cover the hunter quickly dismounts and fires. Should one of these antelopes be wounded, it will make off for some distance, and then quietly lie down and hide. The flesh of the Oribi is considered very good venison, but, like the meat of many other antelopes, it is deficient in fatty tissue, and requires special treatment in the cooking process.

The Oribi is a grass feeder, and is seldom found far from water. The call is a thin, shrill whistle.

The fawns are usually born about Christmas-time, although breeding also occurs in October and November.

The skin of the Oribi is covered with thick, soft



A pair of Oribi from the veld near Port Elizabeth.

hair, and is in great request by native Chiefs as an article of dress. In former times a cow could be obtained as the price of a single skin.

The Oribi is a most graceful antelope, and is so active and swift, and doubles and springs so alertly, that it takes a good dog to run one down.

The Oribi is seen abroad during the mornings and afternoons, and at any time on cool days; but when the weather is hot, it retires to a shady spot to rest.

The average height of an adult Oribi is 26 inches at the shoulder: the colour is tawny-yellow on the back and sides, and white on the under parts; fur is inclined to be curly, and is soft and close; tail short and black for the terminal two-thirds of its length; a tuft of hair grows below each front knee.

The female is hornless.

The Cape Oribi is the only species which inhabits South Africa, but several species occur in Africa north of the Zambesi.

THE STEENBOK

(*Raphiceros campestris*)

Iquini of Zulus; Ingaine of Swazis; Impulupudi of Basutos; Itshabanbanqa of Amaxosa; Phuduhuru of Bechuanas; Umqwena of Matabele; Ee-pen-nee of Makalakas; Shipeni of Shangaans; Gaiee of Masarwa Bushmen; Isha of Swahilis; Timba of Barotse.

The Steenbok, Vlaktebok or Bleekbok, as it is also called, is an inhabitant of the whole of South Africa,

from the coast of the Cape Province to the Zambesi ; and north of our Zoological boundary to Nyasaland. Its favourite haunts are the open plains and bush-veld, but it is occasionally found in rather dense bush-country, but never in rocky, mountainous parts. Its favourite feeding grounds are the open flats with patches of bush dotted over or near it.

The Steenbok is usually solitary except during the mating season, when they are to be seen in pairs. As a general rule they are about during the morning and afternoon, retiring to some shady spot to rest from about nine in the morning till about three in the afternoon. Their food consists of grass, supplemented by young shoots of bushes, and roots and tubers which they scratch up out of the ground with their hoofs. When alarmed this little antelope darts off at a rapid pace, throwing up its hindquarters at each stride in a springy, elegant way. After galloping off for about a hundred yards or so, it usually stops to look round, and thus falls an easy victim to the sportsman's rifle. They often endeavour to escape observation by lying close like a hare, and stretching their necks out along the ground with the ears well back. Lying thus, out on the veld, covered only with short grass, they are difficult to observe and are often passed unnoticed. The moment they become aware their presence is known, they are up and off in an instant.

The Steenbok is regularly coursed with greyhounds or hunted with foxhounds, and having

great endurance they usually give the dogs a good run.

When put up amongst the scrub they are difficult to shoot, owing to their habit of dodging from side to side amongst the bushes.

Should water be available, the Steenbok will drink freely, but like many other antelopes, they are quite independent of water for long periods, as is proven by their existence in the depths of the Kalahari.

They breed most freely during the South African summer and autumn. One fawn is usually produced during the year, but sometimes twins are born.

Although the Steenbok is abroad by day, and usually in exposed situations, it is still almost as common as the Cape Duiker in South Africa. This is largely, however, owing to farmers strictly preserving it upon their lands, and only permitting a limited number to be shot off during the game season.

In the district of Port Elizabeth and surrounding districts it is common, and if protected on farms for a few seasons it multiplies rapidly.

All the larger carnivorous animals native to the country prey upon it, and the eagles also take a heavy toll. I saw an Eagle (*Spizætus coronatus*) stoop at a Steenbok ewe, but the little antelope observing it in time, sprang nimbly aside, and for several minutes it succeeded in successfully dodging this powerful bird of prey. However, the Eagle

secured it, and driving its talons deep into its victim's back, it slew the little creature with a single stroke on the skull with its powerful beak. It then proceeded to tear open its victims' side and feed upon the viscera.

On sighting an Eagle, the Steenbok, when feeding in the open veld, does not attempt to bolt for cover unless such be close at hand. On the contrary, it crouches under the nearest shrub or tuft of grass and lies perfectly still, trusting to the similarity of its colour with that of the surroundings to escape detection.

On the estates of some friends, these little antelopes are not molested, and in consequence they are surprisingly tame and unsuspicious, allowing any one to approach within twenty paces.

Unlike the majority of the other small African antelopes, the Steenbok is a delicate and easily-killed animal, and a shot from an ordinary rook-rifle will kill them instantly if any vital part is struck.

The flesh, although dry, is tender and palatable.

The Steenbok averages 20 inches in height at the shoulder.

In form the Steenbok is extremely graceful and slender, with delicate-looking legs, and bright, lustrous eyes.

The Steenbok is bright sandy-rufous or red-fawn on the back, which colour becomes more intense on the head ; some individuals have a more or less brown hue ; in others the fur of the back is sparingly

Steenbok. Ram, ewe, and fawn.

The Steenbok is an inhabitant of the open veld from the Cape to the Zambesi.

sprinkled with white hairs. The under parts are white; the eyebrows are also white; a black streak is present on the nose, and a well-defined black crescentic spot on the crown.

There are no traces of false hoofs.

There are three local races or sub-species in South Africa, viz. the Transvaal race (*Raphiceros campestris capricornis*) from the North-East Transvaal; the Nyassa race (*Raphiceros campestris neumanni*) further north to Nyassa—this sub-species is paler in colour than the Transvaal race; the Natal race (*Raphiceros campestris natalensis*)—this sub-species or local race from Natal also extends through the eastern part of the Cape Province. In the Port Elizabeth Museum we have a specimen of the latter race from Barroe, which is on the borders of the Uitenhage and Jansenville divisions; and another is referred to by Lydekker in his recent catalogue of Ungulates, vol. ii. p. 151, as coming from Port Elizabeth.

The typical Steenbok is common in Port Elizabeth and surrounding districts, and it would therefore seem that this Natal local race is merely an occasional variety.

I have made careful inquiries and find that our specimen, which is an adult male, was shot in a locality where typical Steenboks are common.

This would lead us to assume the typical Steenbok has a tendency to vary in its markings.

The specimen from Barroe is sparingly shot with white hairs on the back, and the black crescentic

mark on the crown, which is so characteristic of the typical Steenbok, is barely discernible in the Barroe specimen.

SHARPE'S STEENBOK

(*Raphiceros sharpei*)

A LOCAL race of Sharpe's Steenbok, viz. (*Raphiceros sharpei colonicus*) exists in Swaziland and North-Eastern Transvaal. The habitat of the typical species is Northern Rhodesia and Nyassaland.

The Transvaal local race differs chiefly in being larger and longer in the legs than those existing north of the Zambesi.

The red back of Sharpe's Steenbok is strongly grizzled with white hairs which gives it a strong resemblance to a Grysbok, and it is frequently mistaken for it in consequence. An examination of the legs, however, will determine the identification, for it lacks the false or lateral hoofs which are always present on the Grysbok.

Sharpe's Steenbok is partial to rocky localities and open glades.

Major Stevenson-Hamilton says it is fairly common in the northern portion of the Transvaal Game Reserves.

The typical race of Sharpe's Steenbok exists north of the Zambesi.

THE GRYSBOK

(*Nototragus melanotis*)

Syn. : *Raphicerus melanotis*

Inxunxu of Amaxosa; Inhlengana of Swazis and Matonga; Isikupi of Basutos; Sash-lungwān of Matabele; Timba of the Makalakas.

The Grysbok is recorded by various authors to inhabit Africa from the coastal districts of the Cape Province to the Zambesi, with the exception of the more western areas.

That it inhabits the low-lying districts near the sea—from Cape Town eastwards through the Cape Province—we know for certain, but there is no evidence of its existence further north. It has, no doubt, in the past been confused with Sharpe's Steenbok, to which it bears a strong superficial resemblance, both species being red in colour, and shot with white hairs on the back, giving them a grizzled appearance.

The Grysbok inhabits the flat and hilly country where there is plenty of cover in the form of scrub, herbage or thick bush.

In the Port Elizabeth and surrounding divisions of the Cape Province they are exceedingly abundant, alike on the mountains, low hills, flats and valleys. They are rarely found in situations which do not afford a sufficiency of cover. Amongst the low veld herbage and long grass they are common, as well as in the forests and the Addo Bush.

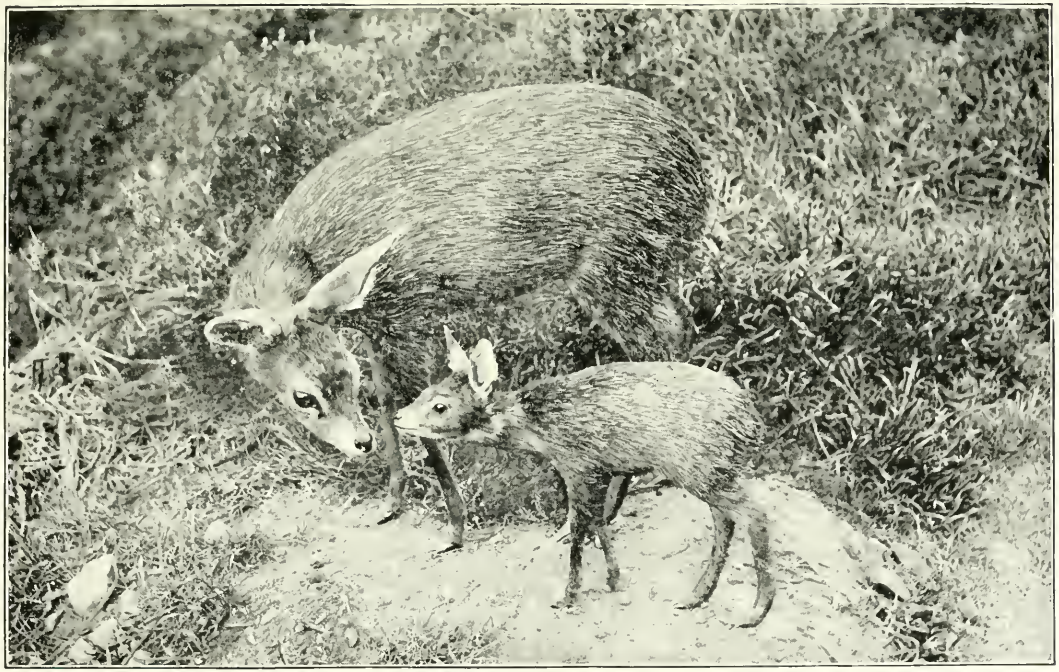
On the southern side of Port Elizabeth, what was formerly sand-dunes is now covered for many miles with a dense forest of trees and tangled herbage. This forest is teeming with Grysbok. During the early morning and at sundown they may be seen in dozens out on the cleared spaces known as fire-belts, which intersect the bush.

During the daytime the Grysbok lies concealed in whatever cover the locality affords, from which it is often difficult to dislodge it. So closely does it lie that a dog will often succeed in approaching to within a few feet of its lair before it scuttles forth. It makes off with head low, and its pace is not great. Out in the open it can easily be run down by a good dog.

Knowing its limitations in speed, it will not take to the open parts unless absolutely forced, and when frightened from its lair it at once makes for the nearest cover. When caught it bleats like a kid. It is found solitary as a rule, and lies in a lair in the most secluded spot it can find. At the mating season the sexes are often seen together.

They feed on grass supplemented by edible wild fruits, berries, tender shoots and leaves. They often venture into cultivated lands during the night, and do considerable damage to young grape-vines, fruit-trees and shooting crops.

These little bucks can exist for long periods without water, often being found in the centre of extensive waterless districts.



Grysbok. Ewe and fawn, from the veld near Port Elizabeth.

The Grysbok is deep chocolate-red or dark rufous-brown on the back; paler on the chest and under parts. The fur is rather long and coarse, and is plentifully interspersed with white hairs on the back. A black patch is present on the crown. Small false or supplementary hoofs are visible, and the true hoofs are shorter and broader than those of the Steenbok. The horns, although like those of the Steenbok in shape, are stouter, shorter, and more curved forwards.

A male Grysbok averages 20 inches in height at the shoulder, and is about an inch higher at the rump.

The white hairs on the back of the Grysbok serve to distinguish it from the typical Steenbok of the Cape; but this is not a reliable guide, because Sharpe's Steenbok of the Transvaal is also stippled profusely on the back with white hairs. When any doubt exists, the feet should be examined, and if small false hoofs are found to be present, the antelope will be a Grysbok, for none of the Steenboks have any trace of false hoofs.

LIVINGSTONE'S SUNI

(*Nesotragus livingstonianus*)

Ithlengane of Zulus; Inhlengana of Amatonga; Inhlengan of Inhambane; Lumswi of the Southern Lower Zambesi natives.

Livingstone's Suni, or Livingstone's Antelope, as it is more usually called, inhabits the whole of the

forest regions from St. Lucia Bay in Zululand to the Zambesi and Nyassaland. Although found in greatest abundance in the coastal districts, it is, nevertheless, common at least a hundred miles inland in places such as the Inhambane district near Coguno, and on the lower Tembe and Maputa Rivers near Delagoa Bay.

These graceful little antelopes inhabit the thick forest belts, and when alarmed, retreat into the dense undergrowth and scrub where it is usually impossible for a man to penetrate. They are exceptionally timid, alert and secretive, and prefer to escape from their enemies by silently creeping into the dense scrub, under the protection of which they slink off like a Jackal or Wild Cat. When driven out of the bush by beaters with dogs, they bound off at great speed, dodging and twisting amongst the trees, and make again for the nearest covert.

So perfectly does Livingstone's Antelope blend with its surroundings, that it is exceedingly difficult to detect them in their leafy home. These animals have regular runs or tracks through the dense masses of undergrowth. The only chance an observer has to watch this dainty-looking little animal at its ease in its forest home, is to secrete himself near a large forest glade before daylight or during the late afternoon, and lie perfectly still. Should he keep careful watch he will probably see one or a pair of these wonderfully graceful-looking antelopes appear from a track and begin nibbling the herbage as it

slowly wanders about. Its actions clearly indicate that it is, every second of time, on the alert against its many enemies. This ever-present dread of the many silent and cunning foes which are ever seeking to destroy it has resulted in its various senses being developed to an exceedingly high degree. The rustle of a leaf, the crack of a twig, or any sound, sight or smell of a suspicious nature, and this wary little creature vanishes in the instant so quickly and so silently that the observer is unable to note in what direction it disappeared.

These antelopes are usually seen singly or in pairs. They venture forth during the early mornings and late afternoons to feed upon leaves, young shoots, grass and a carrot-like root which is common on the bush country inhabited by these animals. In fact this pale flesh-coloured root seems to be their chief food, for it has been noticed that the portions of the forest where the root does not exist, are not inhabited by Livingstone's Antelopes.

They are independent of water, and rarely venture from their leafy retreat, which is often many miles from water of any kind.

Although usually seen singly or in pairs, occasionally as many as a dozen individuals may be observed in forest glades feeding together.

When the weather is cloudy, wet or cool, these little antelopes often move about in a restless way during the daytime, feeding and lying down at intervals.

I have frequently observed animals which are usually purely nocturnal in their habits, come out of their retreats and move about during wet and cloudy weather.

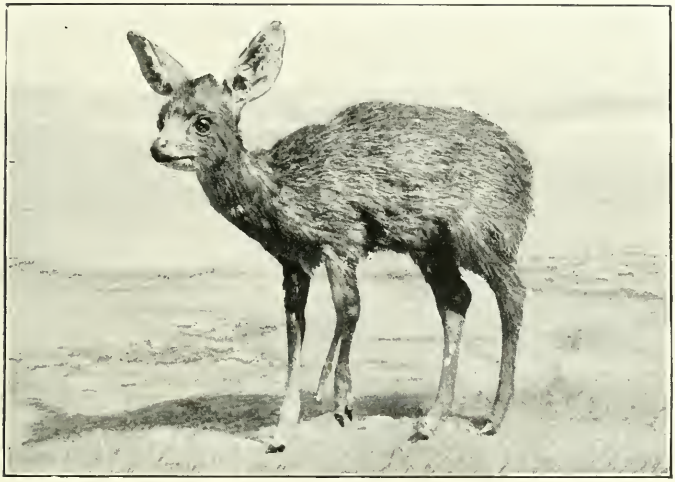
In situations where these antelopes are not persecuted by man, they often lie under the shade of a bush or large tree where the atmosphere is cooler than in the midst of dense scrub.

All hunters agree that the colour of their bodies harmonises perfectly with the red-brown leaves which strew the ground, and amidst which they lie. A native pointed out the spot on which one of these little antelopes was lying under a bush, and although the distance was only about sixty feet, I failed to observe its form. They lie very closely, and spring up and make off only when they realise they cannot hope to escape observation by lying still. However, if alarmed when feeding they instantly vanish into the dense undergrowth.

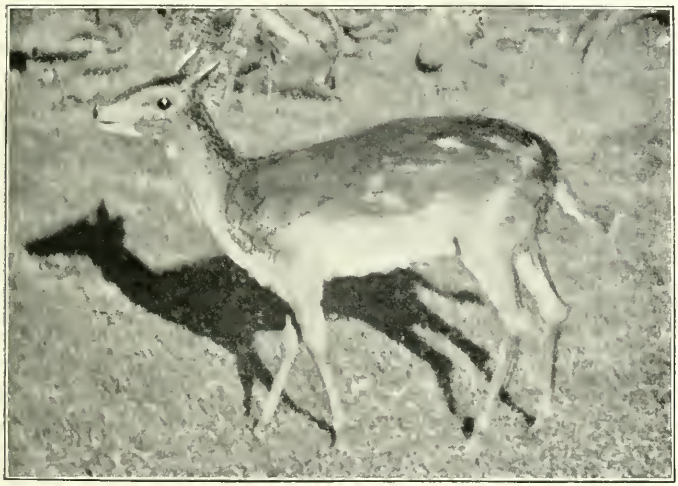
They have three distinct cries, one of these is a clear, sharp, barking note somewhat like that of a Bushbuck, but not so strong and loud. This cry is usually uttered when they hear or scent anything suspicious at a distance.

When suddenly startled from cover, the cry is usually a sharp whistling snort; and during the mating period the males emit a loud bubbling noise like that of a goat ram.

The fawns are born from about the middle of



A Grysbok with five legs, captured on the veld at Port Elizabeth.



Livingstone's Suni inhabits the dense scrub and undergrowth from Northern Zululand to the Zambesi and Nyassaland.

November to the middle of December, and are darker than the parents.

When alarmed this little antelope will usually bound off for about a hundred yards and stand to listen and watch. Should the bush be rather thin, the observer may be able to watch its erratic flight till it stands, by dropping on one knee, so as to see more clearly under the branches.

Like the Grysbok they are delicate little creatures and easily killed.

Livingstone's Antelope averages 16 inches in height at the shoulder, and is rich rufous-brown or light red-fawn on the back, paling towards pure white on the under parts, the insides of the limbs, chest, throat and chin.

The female is hornless.

THE ZULULAND SUNI

(*Nesotragus zuluensis*)

The Zululand form of the Suni has been set apart as a distinct species by naturalists, owing principally to it being larger, the colouring richer, and the fetlocks blacker than in the typical species. In the typical form the hair is not so deep in colour, and presents a more or less grizzled-fawn appearance. The fetlocks only show light indications of black.

It is known to the Zulus as the Inhlengana.

This species of Suni frequents the wooded parts

of the low flats between the coast and the Bombo range in north-eastern Zululand.

THE DAMARALAND DIK-DIK

(*Madaqua damarensis*)

The Damaraland Dik-dik inhabits the rocky barren hills and the partially bushed country on the west side of Africa near the coast from Omaruru, which is about forty miles north of Walfisch Bay, to the southern portion of Angola.

Although there are about a dozen species of Dik-diks inhabiting Africa, the Damaraland Dik-dik is the only species found in South Africa.

Dik-diks are very small antelopes of about the size of a hare, and are of delicate and slender build. They are all remarkable for their curious, prehensile or trunk-like noses.

The Damaraland Dik-dik is slightly larger than the other species of Dik-diks. It averages 14 to 15 inches in height at the shoulder, and is rufous-fawn or speckled dark grey on the back; the speckled appearance being due to the hairs being pale for the greater part of their length, with black subterminal and pale tawny bands at the tips. The hairs covering the shoulders, sides, neck, face and flanks are minus the black bands, and are not speckled in consequence, but present a pale rufous appearance.

The under parts and the insides of the legs are pure white; the chin and a ring round the eye white; a long tuft of straight hairs on the crown partly conceals the horns; tail very short.

The female is hornless.

THE WATERBUCK

(*Cobus ellipsiprymnus*)

Ipeva of Zulus and Swazis; Ipiklwa of Basutos; Tumogha of Bechuanas; Situmogha of Matabele; Eetumuha of Makalakas; Eekulo of Masubias; Chuzu of the Chilala and Chizenga countries; M'dongoma or Matutwi in the Barotse country; Kuru of the Swahili; Mashigi-gig of Makobas and Botletli; Balango of Somali.

The Waterbuck or Kring-gat of the Dutch Voortrekkers inhabits the open forest country of Zululand, the eastern Transvaal, Rhodesia and South-West Africa. In fact, in all wooded and well-watered tracts, from Zululand on the east to South-West Africa, and up to the northern Zoological boundary of South Africa, the Waterbuck may be found. From the Zambesi it ranges northwards up the eastern side of Africa to Somaliland.

In the eastern Transvaal and the game preserves of Zululand, the Waterbuck is the most numerous of all the larger antelopes.

This noble antelope, as its name implies, favours localities where rivers, marshes and ponds abound. Their favourite resorts are the rough, broken, bushy country and the sides of steep, shady hills near rivers or marshes, to which they retreat when disturbed.

They associate in herds of from half-a-dozen to

Waterbuck bull. From the Zululand Game Reserve.

about three dozen individuals, usually consisting of a fully adult bull and a number of females and immature animals of both sexes. Small troops of young males consisting of four to half-a-dozen individuals may often be seen together, and occasionally a solitary old bull is observed. Sometimes two herds may be seen feeding together on the succulent vegetation along the banks of streams.

Major J. Stevenson-Hamilton says that along the Ngwanitzi River in the Transvaal Game Reserve these antelopes are so numerous that troops of them are hardly ever out of sight of the traveller.

Notwithstanding its rather heavy build and comparatively short legs, the Waterbuck is exceedingly active on broken ground, and climbs the steep and rough hillsides with ease and considerable speed.

When pursued the Waterbuck often, but by no means always, makes for the nearest river or marsh into which it readily plunges, for it is a most excellent swimmer. When it takes to the reedy marshes, it leaps through the shallow water in great bounds and is soon lost to sight.

When wounded and very hard pressed this antelope often enters the water, and, immersing its body, stands at bay with head and neck raised above the surface to give battle to any dogs which might be bold enough to attack it. Standing thus, it can deliver the most formidable and effective strokes with its horns, and often succeeds in keeping an entire pack of dogs at bay.

Even on land a wounded Waterbuck should be approached cautiously, for it is apt to charge fiercely and kill or wound its aggressors.

Sometimes when wounded the Waterbuck plunges into the dense thickets of reeds which are so common in the vicinity of African Rivers, and stands immovable, hoping thus to elude its pursuers.

The larger carnivorous animals such as the Leopard, Chita and Cape Hunting Dog prey upon the females, calves and immature males, but seldom venture to attack an adult bull Waterbuck.

The Lion is the natural enemy of these powerful horned bulls, which, in spite of their great strength, are no match for this formidable cat.

When females or calves are attacked by a Leopard, Chita, or Wild Dog, the bull Waterbuck will often come to the rescue and drive them off.

The calves are born during the summer season, viz. from October to February.

The Waterbuck is a grass feeder.

The flesh is coarse in grain and is condemned by hunters and others as being dry, tasteless and most unpalatable. On the contrary, Major Stevenson-Hamilton declares in his *Animal Life in Africa* that when the flesh is hung for the correct period and properly cooked it is as good as the venison of most other antelopes. He points out that when cooked fresh by native "cooks," as is usually the case, it is naturally spoiled, and is most uninviting owing to the nature of the meat, which requires special treatment.

The skin of the Waterbuck is tough and resists the action of water and damp, and is, in consequence, sought after by the Dutch colonists for the purpose of making veldschoons, which are a rough sort of shoe of home-tanned leather.

The Waterbuck bull is a noble-looking antelope, and presents a truly splendid sight when he stands listening or gazing around with his fine head and horns held erect after the manner of a Red Deer Stag.

The cow, which lacks horns, and is less robust in build, is a contrast to the showy and defiant-looking bull.

The cows, however, are keenly observant, suspicious and watchful, and their sight and hearing are remarkably good. In these respects they are far superior to the bull, who, evidently recognising their fitness, allows them to act as sentinels to the herd.

The Waterbuck, like most of the other African Antelopes, are very tenacious of life, and will at times travel considerable distances after being severely or even mortally wounded.

This antelope gives off a peculiar scent or odour which is very penetrating, but not disagreeable.

The Waterbuck is brown with a tinge of sepia, becoming paler on the sides and under parts. The face and lower parts of the limbs are dark sepia-brown. The hair is coarse and somewhat grizzled in appearance owing to each hair being light in

colour at the base and darker at the tips. A pure white line or band encircles the rump; and a narrow band of the same colour encircles the throat.

The female is smaller than the male, and the white lines and patches are not so distinct. The hair is more shaggy and slightly longer, especially around the neck.

In some herds the brown and sandy-grey line is darker than usual. The shade of colour seems to be dependent upon the environment of the animals.

The young calves are reddish in colour. The period of gestation of the female is about eight months.

An adult bull Waterbuck averages 4 feet at the shoulder, and weighs about 360 lbs. clean.

The female is hornless.

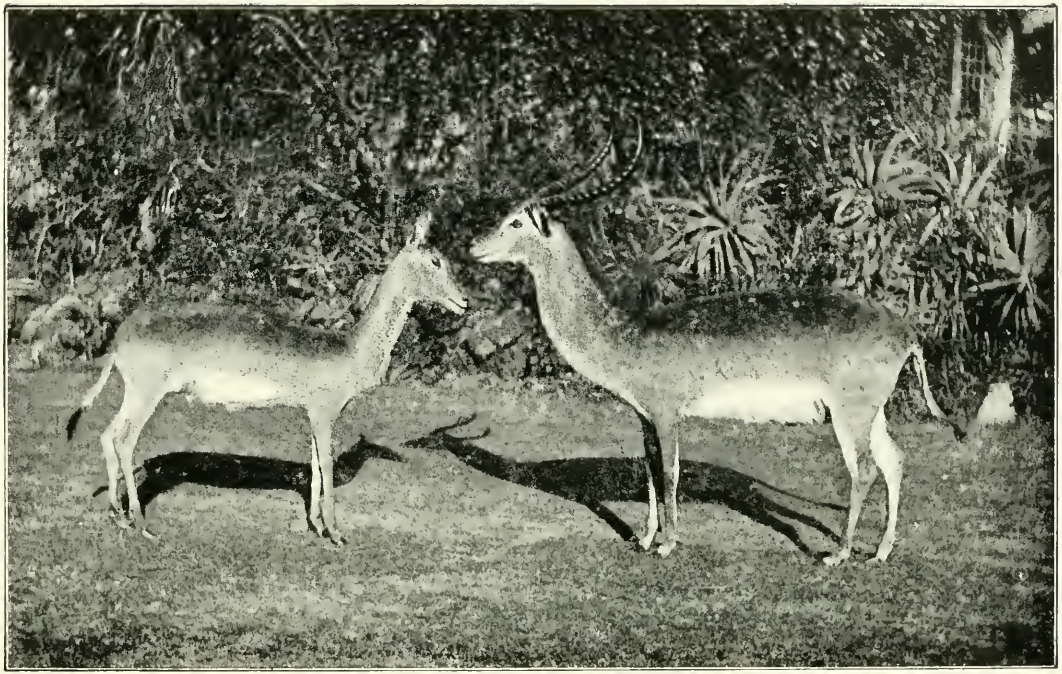
THE LECHWE KOB

(*Cobus lechi*)

Lechi, or Li-gwi of the Makololo and Northern Bechuanas; Inya of the Masubias; Unya of the Makubas.

The Lechwe Kob inhabits the northern parts of South Africa from Lake Ngami northwards along the upper Zambesi and its many tributaries; and through north-east Rhodesia to the neighbourhood of Lake Mweru.

The Lechwe is a more water-loving animal than



A pair of Lechwe from Lake Ngami.

its cousin the Waterbuck; and next to the Sitatunga is considered to be the most aquatic of all antelopes in its habits, being, in fact, a true swamp dweller.

Great stretches of country bordering many of the rivers is submerged by water owing to the annual overflow of the rivers. In these vast swamps great forests of reeds and papyri grow, which afford food and shelter for the Lechwe.

They associate in large troops of ewes and several herd rams, and at other times troops of adult and immature males without a single ewe are observed.

The Lechwe spends most of its time wading knee-deep in water through the shallow lagoons or water-covered flats, grazing on the tops of the grass and young reeds which grow up out of the shallow water.

When at rest the Lechwe lies either at the water's edge or in very shallow water.

When alarmed they make off into the reeds and papyri to the deeper water in the heart of the swamp, progressing with great leaps or bounds. Even when the water nearly covers their bodies they continue to spring and bound with much splashing. On reaching deep water they swim with great facility, but can be overtaken by a native paddling in a canoe. The natives, aware of this fact, surround and drive them into the deep water, when they are overtaken and speared.

The natives prize the skin highly, converting it

into karosses which are as soft and pliable as chamois leather.

The Lechwe is very tenacious of life. The males are not aggressive when mortally wounded and brought to bay, as is the case with the Waterbuck. Even when shot right through the heart they will often travel a considerable distance.

When they start to run they thrust their noses straight out, and the males lay their horns flat along the back. They trot at first, and afterwards break into a clumsy gallop until they reach knee-deep water, through which they splash and bound.

The young are born during the months of October and November.

The flesh is much superior to that of the Waterbuck, and when properly hung and correctly cooked it makes a palatable dish, although the fat has a somewhat clogging tendency, and clings to the teeth and palate.

The Lechwe was first discovered on the banks of the Zonga and Botletli Rivers by Livingstone and his companions Oswell and Murray, who travelled with him in 1849 when he made his first journey to Lake Ngami.

This antelope is the handsomest of the Cobus group or genus inhabiting the southerly part of Africa. It is slightly smaller than the Waterbuck, and averages 3 feet 4 inches at the withers. Although thick-set, its body is very symmetrical. The prevailing colour is a rich dark-red or chestnut, becoming

white below with black markings down the fronts of the fore and hind limbs, darkest above the knee. The head, face and upper part of the neck are pale yellow-brown. The tail, which reaches to above the hocks, has a tuft of long black hairs at the end.

The female closely resembles the male, but is smaller and has no horns. The young males have black tips to the ears.

The horns are more curved than those of the Waterbuck, and are ringed to within a few inches of the tips, which are black and curve strongly forward.

THE PUKU

(*Cobus vardoni*)

Impuku of the Masubias; Muntinya of Barotse; Seŭla of Chilala and Chibisa.

The Puku formerly inhabited the upper parts of the Zambesi valley and its tributaries, and extended through the Barotse country as far north as Lake Mweru on the borders of north-eastern Rhodesia and Belgian Congo. It is, however, almost, if not quite, extinct south of the Zambesi, where its range was at the best of times a limited one.

The Puku Antelope associate in herds which vary in numbers from three or four to a dozen. In former times, when they were more plentiful and not harassed by European hunters, as many as fifty were often seen in a herd. Small herds of old rams

are sometimes seen together. These are individuals which, through failing strength, have been driven off by more virile and younger males. On the approach of the breeding season, the males of the various species of antelopes engage in combat, which results in the victors becoming the favoured suitors of the females, and the vanquished being driven off and compelled to live celibate lives. In this way the survival of the fittest is assured.

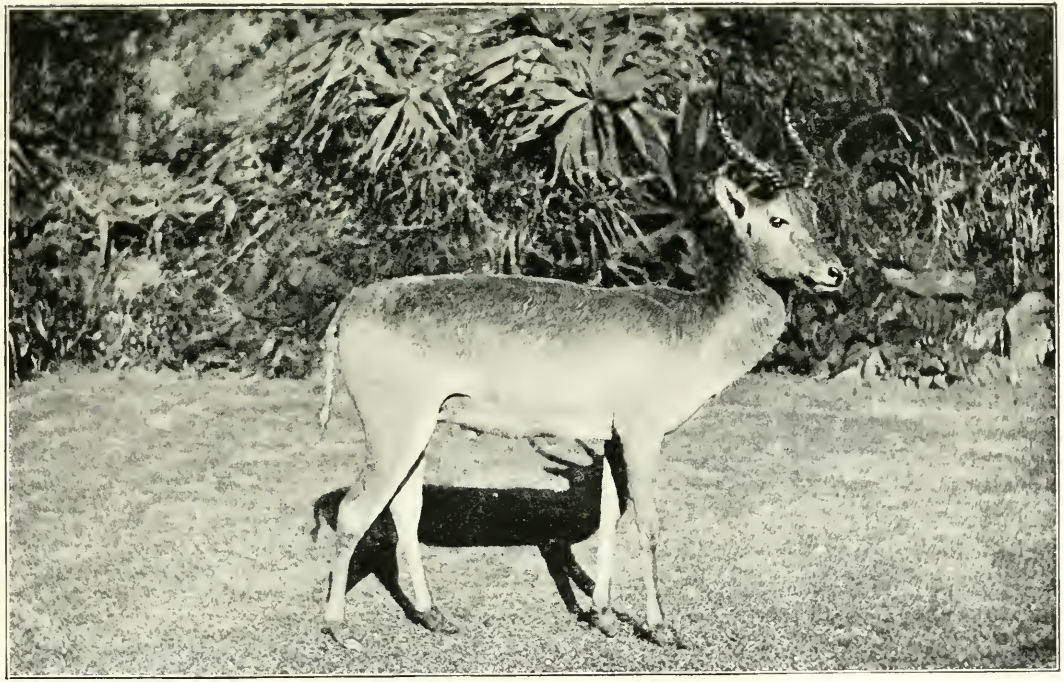
The habits of the Puku are more or less similar to those of the Waterbuck.

They are usually met with along the banks of the rivers, grazing on the succulent herbage which thrives along the banks, and are never met with out on the treeless, swampy plains which are such favourite grazing grounds of the Lechwe Kob.

When a Puku is wounded it usually seeks to escape to the bush; but when hard pressed it will plunge into a river and swim across in the endeavour to elude its pursuers.

Some fifteen years or so ago the Puku became so scarce that the horns rose from £25 to £30 per pair, but owing to the checking of the former wholesale and indiscriminate destruction of game animals, these fine antelopes will be saved from extinction.

There is no inducement to sportsmen in shooting this antelope other than securing the head as a trophy, for the flesh is coarse and without flavour, and is, in consequence, most unpalatable to Euro-



A Puku ram from the valley of the Zambesi.

peans. The late Mr. F. C. Selous considers the meat of this animal inferior to that of any other species of South African antelope.

The Puku, like the others of the same genus, is very tenacious of life.

It was first discovered by Dr. Livingstone on the Zambesi, in the vicinity of Libonta in Barotseland, in the year 1853.

The young are born during midsummer, viz. in November and December.

The Puku is orange-yellow in colour, which becomes paler round the eyes, on the chin and under parts of the body. The average height at the shoulder is 3 feet, and weight about 190 lbs.

The female is hornless.

Other Species of the Waterbuck Group

There are several other species and local races of the Waterbuck (*Cobus*) group of antelopes inhabiting Africa north of the Zambesi.

The Waterbucks are divided into two groups, viz.:

(1) True Waterbucks of large size with maned necks and coarse grizzled hair, such, for instance, as the common Waterbuck (*Cobus ellipsiprymnus*).

(2) Waterbucks of smaller size, known as Kobs, with hair more or less rufous or orange-yellow, and no mane to the neck such as the Lechwe Kob (*Cobus leche*) and the Puku (*Cobus vardoni*).

THE REEDBUCK

(*Redunca arundinum*)

Mziki of the Zulus and Matabele; Inhango of the Swazis and Matonga; Cipohata of the Bechuanas; Iklabu of the Basutos; Eebeepa of the Makalakas; Imvwee of the Masubias; Bemba of the Masarwas; Impoyo of the Lower Zambesi natives; Natafwi in the Mashukulumbwi country; Mutobo in Barotseland; Sibughat in Ngamiland; Mpoyo in the Chilala and Chibisa countries; N'tobi of the M'kua; Bushmat of the Sudanese.

The Reedbuck or Reitbok of the Dutch colonists inhabits Africa from the eastern side of the Cape Province up through Natal, Zululand, the Transvaal bush country, along the East Coast rivers and their tributaries, particularly those of the Limpopo and Zambesi, and Rhodesia, both north and south of the Zambesi River, Ngamiland, South-West Africa to Angola on the west, and Nyassaland and Mozambique on the east.

In the Knysna bush and dense reedy groves in the eastern portion of the Cape Province this antelope is still occasionally met with. In Natal it is also uncommon, but in Zululand and the other portions of its habitat it is plentiful.

The Reedbuck is an inhabitant of the dense masses of reeds and long grass which grow in such profusion in the damp valleys, and along the banks of rivers throughout the low country. They are also found in thin bush on well-watered mountain plateaus. In localities where they are constantly persecuted

they find sanctuary in the dense forests. Although they live in close proximity to water as a general rule, the Reedbuck does not take to it when pursued, but at once plunges into the reedy brakes where it is at once lost to view. Kirby, however, states that when hard pressed it will take to water readily, and swims with great vigour; and to avoid its pursuers it sometimes sinks its body in some deep waterhole with only its nostrils above the surface of the water.

Although partial to reed beds (as the name implies) they often make their lairs in long grass on high ridges and in scrub on the bush-veld. They always select a dry place to lie down on, even when they are in close proximity to water. When disturbed the Reedbuck bounds from its lair and proceeds at a rolling gallop, and seems to maintain the same speed whether traversing good or broken ground. As the buck makes off it goes with low, easy bounds, and presents each flank in turn to the sportsman, thus offering the chance of an easy shot.

If disturbed at a little distance, and when the danger does not appear imminent, the Reedbuck usually gives vent to a clear, sharp whistle, gallops off a distance of about 150 yards, and turns to gaze at the intruder, thus affording an easy mark for the hunter. If not shot at, it whistles again, makes another spurt, and repeats this action several times.

The ewes are far more timid than the rams, and

usually when alarmed gallop off at great speed until out of sight.

I have always noticed in localities where they are frequently hunted, both the ram and ewe break away instantly at full speed, usually to the nearest reed beds, long grass or bush.

These antelope usually associate in pairs, but small family parties of four or five are occasionally seen, although a dozen or more may at times congregate to feed upon a restricted patch of sweet, sprouting grass.

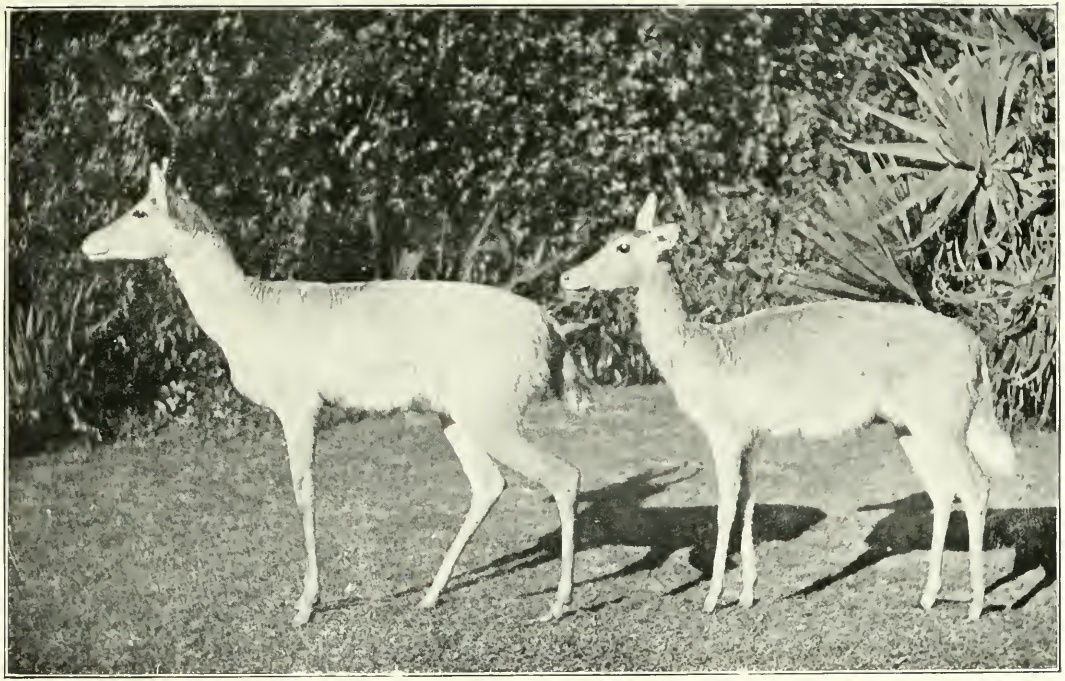
Their natural diet is grass, but they acquire a great fondness for young mealie plants and other garden produce.

In localities such as game preserves where they are not molested, the Reedbucks soon become quite tame.

On the approach of the breeding season the rams fight fiercely, the combat sometimes terminating in the death of the weaker of the two.

The young are born during the spring and summer months. In what is known as the low country in South-East Africa they are produced as early as August and September, but in the mountain plateaus, according to Kirby, the young are born from December to March.

The Reedbuck averages 34 to 36 inches at the shoulder. The hairs are dark brown at the base and yellow at the tip, giving a speckled fulvous-brown shade of colour which is darkest on the back, becoming paler and almost white below, and on the



Reedbuck or Reitbok. Ram and ewe.

The Reedbuck inhabits the reed beds and long rank grass in valleys, vleis, and along water-courses. When persecuted it makes its home in the dense tangled forests.

inside of the limbs, the sides of the face and round the lips. Some individuals have a black patch on the nose; and with others it is present on the crown. On the nose there is a rounded swelling. About an inch below the ears there is an oval, glandular patch which is bare and black in the adult, but covered with fine white hairs in the young. Dark streaks run down the fronts of the fore-limbs. These dark stripes encircle the limbs just above the hooves; on the hind limbs dark stripes are present, but are less pronounced and do not reach to the hocks. Tail thick, bushy and white below, dark above, the two colours in sharp contrast.

The female is a little smaller than the male and is hornless.

The common Reedbuck of South Africa is replaced in the more northern parts of the Continent by the Bohor Reedbuck (*Redunca bohor*) which is similar in general appearance, but smaller in size, and the horns are shorter and more hooked at the tips.

THE MOUNTAIN REEDBUCK OR ROOI RHEBOK

(*Redunca fulvorufula*)

Inhlang'amatshe (Reedbuck of the Rocks) of Swazis and Zulus; Inxala of Amaxosa.

The Mountain Reedbuck or Rooi Rhebok (Red Rhebock) as it is generally known in South Africa,

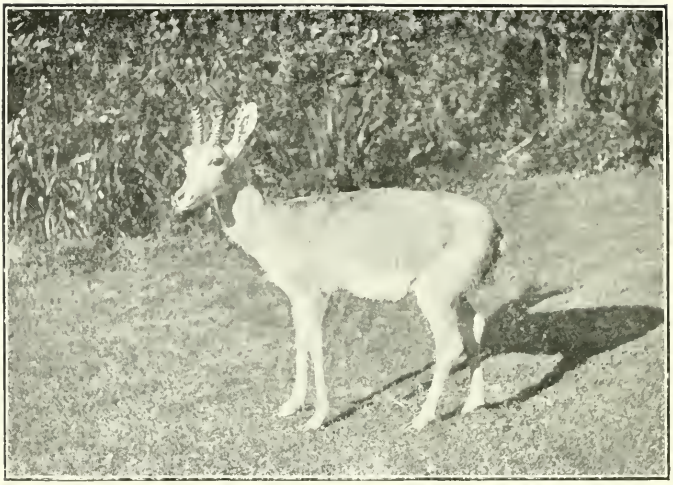
inhabits the stony slopes of hills of the eastern part of Cape Province up through Natal, Zululand, Swaziland, Basutoland; and westwards through the Orange Free State, the Transvaal to Bechuanaland, and northwards to the Zambesi. A local race or sub-species occurs in East Africa, north of the Zambesi.

The Rooi Rhebok associates in small parties of from four to eight or a dozen individuals. They inhabit the rocky slopes of the hills and mountains, mostly on the bushy sides just below the krantzes. They are very wary and suspicious, and when either resting or feeding, a sentinel, usually an old ram, keeps a sharp lookout, and on the slightest suspicion of danger sounds the alarm signal, which is a shrill, sharp whistle, and is indistinguishable from that of the common Reedbuck.

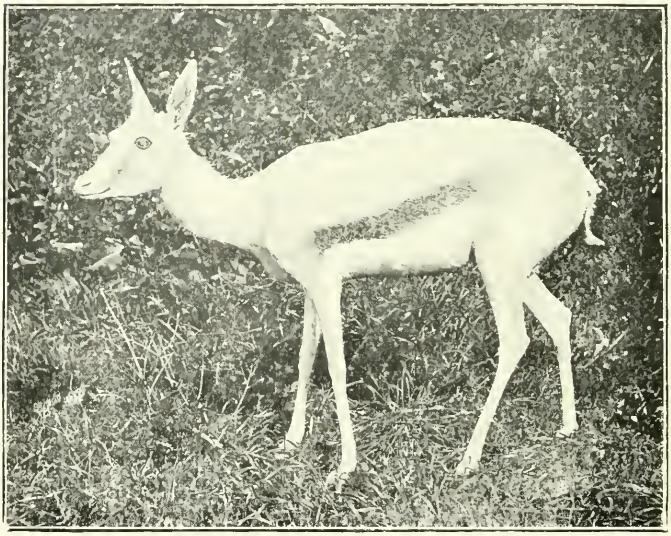
Their favourite haunts are on the sunny slopes and shallow gullies amongst the dry grass and stunted bushes. In former times they were common amongst the foothills and lower terraces; but since the country has become more settled, these antelopes have retired to the safety afforded by the higher elevations. Sometimes solitary old rams may be seen. These were former chieftains, which, owing to advancing age were unable to hold their leadership against the younger and more robust males.

The flesh of this buck, although palatable, is inferior to that of the common Reedbuck.

When alarmed they make off at a free, easy,



The Mountain Reedbuck or Rooi Rhebok. This antelope is somewhat larger than a sheep.



This Springbuck ewe is snowy-white, with the exception of the rufous side stripes. From Carlton, Cape Province.

rocking-horse-like gallop, like their cousins, the Reedbucks of the vleys. When running their stumpy bushy tails are thrown up, showing the underlying white.

The young are born between the months of October and December.

The Rooi Rhebok is usually seen on the move during the early hours of the morning, and seeks a shady spot to lie down when the suns rays grow hot. After nightfall they descend the hills, feeding leisurely down to water, where they remain, unless alarmed, until shortly before dawn. It is at these times they often fall a prey to the Leopard and Lion. They descend from their fastnesses nightly for the double purpose of slaking their thirst and feeding upon the grass, which is fresher, crisper and greener than on the stony mountain slopes.

On observing a hunter in the distance, the mountain Reedbuck, instead of making off, slinks silently down behind a boulder or bush, hoping to escape observation. When disturbed they either run obliquely downhill or round the mountain; seldom climbing to the top, as is the habit of the true or Vaal Rhebok.

They are not remarkable for tenacity of life, and in this respect differ from the majority of the African antelopes.

The names Mountain Reedbuck and Rooi Rhebok are both rather inapplicable. Although one of the Reedbuck family, and like the others more or less

in outward form and shape of horns, yet it is essentially an inhabitant of the dry, rocky hills, and not the reedy plains and river banks; and the latter name of Rooi Rhebok is also unfortunate, as it is not a true Rhebok at all. The name was given by the Voortrekkers on account of it being a mountain-frequenting antelope like the Vaal Rhebok (*Pelea capreolus*).

The Mountain Reedbuck averages 28 inches at the shoulder.

The hair is a warm red-brown, buff on the throat and sides of the face. The under parts and inner sides of the limbs are white.

Adult rams often acquire an ashy-brown hue.

The female is hornless.

THE GREY OR VAAL RHEBOK

(*Pelea capreolus*)

Iliza of Amaxosa, Swazis and Zulus; Pshiatla of Basutos; Peeli of Bechuanas.

The Grey or Vaal Rhebok inhabits the mountainous districts of the whole of South Africa south of the Limpopo River.

The Rhebok was so-called by the early settlers at the Cape because of its fancied resemblance to the Roe-buck or Roe-deer of Europe.

These antelopes associate in pairs or small family parties of from five to six to a dozen females, im-

mature males, and one old ram which assumes the leadership. Solitary old outcast rams are occasionally seen.

They chiefly inhabit the flat tops and sides of the mountain ranges and high hills. I have, however, frequently observed them at dusk on the tops and sides of low, grassy or rock-strewn hills, and when disturbed they made off along these hills, and if hard pressed they descended to the plains and headed for the nearest range of mountains.

When feeding or at rest, a sentinel keeps guard on an adjacent elevation in the shape of a hillock or kopje, and gives the alarm by uttering a sharp snort or coughing sound, whereupon the troop, led by the old ram, retreat at a rapid pace, usually in a direction previously decided upon. When making off they present a rather novel sight, owing to their habit of jerking up the hindquarters at every bound and holding the tail erect, exposing the white under-surface.

They feed during the early morning and evening, chiefly on grass, and rest during the day amongst patches of bush and boulders, or in the sheltered gullies on the high slopes; or on the open plateaus amongst the loose stones, boulders or grass.

They descend to the lower lands at night to drink and feed upon the more succulent grasses which thrive on these lower levels, and ascend to their mountainous retreats before sunrise.

They are often attacked by a species of Bot-fly

which punctures the skin of the back, and lays an egg which subsequently hatches into a grub or larva. This larva lies in a pocket under the skin, and feeds upon the juices of the animal. Unsightly excrescences are thus raised on the victim's back. I have seen as many as a dozen on a single animal, although two or three is more usual. These Bot-flies seem to be particularly active during exceptionally dry weather.

Although not noted for speed, the Rhebok is tough, wiry and enduring, possessing wonderful activity and untiring energy.

The fawns are usually born during midsummer, viz. from about the middle of November to the end of December. They are carefully hidden by the mothers in the grass or scrub, or amongst the boulders. During December should a ewe show decided reluctance to make off on sight of an intruder, and the spot is marked down, a very young fawn or two will usually be found lying concealed in a neighbouring patch of bush or grass.

To hunt the Rhebok in true sportsmanlike fashion requires good health, untiring energy, perseverance and keen powers of observation, if any success is to be expected.

The flesh is dry and unpalatable, and requires to be hung for a period and carefully cooked to make it eatable, except to a hungry hunter.

The thick woolly nature of the fur, the long, thin neck and straight, upright horns, and the absence

The Vaal or Grey Rhebok. Ram, ewe, and fawn.

The Vaal Rhebok lives on the flat tops of mountain ranges and hills, or on the slopes near the top.

of bare patches below the ears, serve at once to distinguish this antelope from the other members of the sub-family, viz. the Reedbucks.

The Vaal Rhebok averages 28 to 30 inches in height at the shoulder.

The prevailing colour of the fur is grey with a tendency to fawn on the head and limbs, and in shape it is slight and graceful. The tail is short, broad and bushy.

The ewes are usually a couple of inches lower at the shoulder than adult rams, and are hornless.

THE IMPALA OR PALLA

(*Aepyceros melampus*)

Rooi-bok of the Boers; Impala of Zulus, Swazis and Matabele; Pala or Pallah of Basutos and Bechuanas; Impaya of Shangaans; Eepala of Makalakas; Kug-ar of Masarwa Bushmen; Inzero of Masubias; Nswala of Lower Zambesi natives; Pala of Waganda; Luondo and Mpala in Barotseland, Ngamiland, Chilala and Chibisa.

This graceful antelope, which is known to the South African Dutch colonists as the Rooibok, formerly inhabited South Africa as far south as Kuruman in Bechuanaland, but is now extinct in that locality. At the present time it is found along the Limpopo River and its affluents; and in Zululand, the Eastern Transvaal, Portuguese East Africa and Rhodesia. Beyond the Zambesi it extends up the east side of Africa to Lower Kordofan.

Impala are gregarious, associating in troops or small family parties of five or six, to large herds of a couple of hundred individuals. All gregarious animals, however, when persecuted by man, break up into small parties and troops and scatter over the country.

The ewes always largely predominate in a herd; and often an entire herd is composed of females and a few immature males. At other times a few adult

rams are seen amongst them. The young males, as a rule, associate in small parties by themselves.

During the winter months those of both sexes herd together in a promiscuous manner, but, on the approach of the mating season fierce combats are waged, resulting in the stronger and more virile males securing a harem of from half-a-dozen to twenty or more wives. At these times herds consisting of one adult ram and a dozen to two dozen ewes, small herds of immature males, or adult males who have failed to secure mates, may be seen scattered through the bush-veld.

The Impala inhabits those portions of the low country covered chiefly with dense thorn-bush. Their favourite haunts in the winter months are the forest-clad banks of streams where all their requirements are at hand, viz. shelter, food and water.

When surprised in the open, they always head direct for the bush. During the dry season they drink as often as three times daily; but when the rainy season sets in, and the herbage becomes green, succulent and laden with moisture, both from the rain and the heavy night dews, they wander away from the rivers and forest pools. At the end of the rainy season the food supply becomes more or less restricted to the neighbourhood of streams, and the Impala once again converge to these localities, where they dwell for about five months.

The Impala graze largely on grass, especially when it is young and tender after the first spring

rains; but their chief diet consists of the pods and leaves of different species of acacia trees, and the shoots, leaves and fruits of various other trees and plants are eaten.

During the summer season the rams are fat and sleek, but the ewes are lean, owing to the drain on their systems in suckling their lambs. In the winter season, however, the ewes grow fat, and the rams usually get into poor condition.

During the mating season, which in South-East Africa is from the middle of April to the middle of May, the rams are very noisy, making the bush resound day and night with a deep, guttural bark or grunt.

A curious fact is that during this time the rams are very watchful and alert, while the ewes are the reverse, and at all other times the conditions are reversed.

The lambs are born during November and December. One is usually produced at a birth, and twins on rare occasions. The lambs begin to frisk and play within three hours of birth, and their growth is very rapid. In the Transvaal Game Reserves under the able charge of Major J. Stevenson-Hamilton, whose contributions to a knowledge of African animal life is so well-known, the Impala are increasing rapidly in numbers, and there is now no danger of this beautiful bush antelope becoming extinct.

The Impala is known as the "Springbok of the

low veld" owing to its marvellous leaping powers. Kirby measured three successive bounds of 26, 16 and 28 feet, making 70 feet in all. An animal dealer in Port Elizabeth exported a good many of these antelopes to Europe. On one occasion I was in his yard taking photographs, when an Impala ram, frightened by the fluttering of the camera-cloth, sprang clean over an 8-foot fence, and then leapt upon the roof of a shed 9 feet in height. When given a clean run, an Impala will clear a 12-foot fence apparently without any undue effort.

These antelope are readily tamed, with the exception of the old rams, which often become surly and savage. These should always be kept in solitary confinement, as they are apt to attack and gore any others of their kind if herded together in a single enclosure.

The Impala when alarmed makes off through the bush at a rapid rate, bounding over the bushes, rocks and dongas in a wonderfully graceful and easy manner.

Their chief natural enemies are the Lion, Leopard, Chita and Cape Hunting Dog. The Crocodile, with which most of the large African rivers are infested, lies in ambush ready to seize them when they approach the water to drink. At the lambing season the smaller carnivora prey upon the lambs.

The Impala is bright chestnut-red on the back, shading off on the sides to pale red-fawn. The under parts and insides of the limbs are pure white.

Head and neck are yellow with a reddish tinge ; the ears are tipped with black and pointed ; tail with a black stripe on the upper side, the tip and lower part white. A black line is present round the buttocks, and a tuft of black hair adorns each hind-leg over the fetlocks. In this tuft of hair is a gland which manufactures a fatty substance.

An adult male stands 3 feet at the shoulder. The female is about 4 inches lower and is hornless. Weight of an adult male 135 to 160 lbs.

Local Races

There are two local races or sub-species of Impalas, viz. the Nyassa race (*Aepyceros melampus johnstoni*) which does not occur within our limits, and the Angola race (*Aepyceros melampus petersi*). The latter inhabits Angola on the western side of Africa, and having been discovered south of the Cunene River it is included in the list of South African fauna.

It was made a separate species, and recognised as such by authors in the past.

It is similar to the typical Impala of South Africa with the exception that the front of the face, exactly in the centre, from the nostrils to the line of the eyes, is marked with a purplish-black streak. This difference does not justify us in making a new species of it. In the 1914 edition of *Records of Big Game* it is distinguished as a local race only.

THE SPRINGBUCK

(*Antidorcas marsupialis*)

Springbok and Pronk-bok of the Boers; Ibadi of Amaxosa; Tsipi of Bechuanas; Itsaypi of Makalakas; Menya of West African natives.

The Springbuck, or Springbok, in former times swarmed in great herds over the high, open plains of the Cape Province, Orange Free State, Transvaal and Bechuanaland, but is now very seldom seen except on enclosed farms where they are preserved.

On the Springbuck Flats in the Waterberg district of the Transvaal large numbers of these antelopes live and thrive under Government protection.

In the wild, free or feral state the Springbuck still thrives in South-West Africa, Bechuanaland, and as far north as Benguela in southern Angola on the west, and in the east as far as the Limpopo River.

On the advent of the Dutch Voortrekkers, the high veld was found to be teeming with countless numbers of Springbucks. Driven from one part of the country by drought, and consequent scarcity of food, they migrated in vast herds of as many as half a million. This vast army would pour from the dry, desert-like high veld of the north-west into the great Karoo-veld, devouring every particle of edible vegetation as they proceeded. So vast was the stream that various other species of animals, including

sheep and goats, were caught up in the seething countless swarm of Springbucks and irresistibly borne away. At these times the farmers turned out to a man and slaughtered them in great numbers, and cut up the flesh into long, thin strips and dried it in the sun. This sun-dried meat is known as biltong. In this way the farmers laid by immense stocks of wholesome savoury meat.

The farmers were frequently obliged to turn out and shoot these antelopes in self-defence, for, when they swept over a farm they not only caught up the various stock in their mass, but left the land absolutely destitute of vegetation. Mr. W. C. Scully, the well-known South African author, tells many thrilling and fascinatingly interesting stories of these great Springbok treks.

On one occasion, when he was Civil Commissioner for Namaqualand in 1892, and special Magistrate for the Northern Border of Cape Colony, he was obliged to issue a hundred stand of Government rifles to the Boers for the purpose of turning aside a threatened invasion of migrating Springboks, which would otherwise have swept off the crops in the entire district.

So vast were the swarms of bucks in these trek-bokken, as these wonderful migrations were called, that they even swarmed through the smaller villages, choking the streets with their living stream.

Lions, Leopards, Cape Hunting Dogs, Hyænas, Jackals and other carnivorous animals and birds of

Impala or Pallah. Ram, ewe, and fawn.
The Impala is noted for its wonderful leaping powers.

[See page 86]

prey, like an army of camp followers, kept in the wake of these migrating herds, preying upon them whenever they felt so inclined. So prolific was the Springbok that, in spite of the great mortality caused by their natural enemies, severe periodic droughts, and the pygmy Bushmen and Hottentots, these antelopes continued to increase in numbers until the advent of the European colonist, who steadily reduced them to a mere fraction of their former strength.

The Boers divided the Springboks into two sections: the "hou-bokken," which usually remain on the same veld, and the "trek-bokken," which were those that migrated. These latter were generally smaller, and not in such good condition as the former.

Springboks live out in the open, exposed, treeless veld, and do not seek shelter except in exceptionally cold weather or during the lambing season, when they sometimes betake themselves to the bush-veld. In the past they associated on the South African veld with the Zebra, Wildebeest, Blesbok and Ostrich. In his interesting book *Between Sun and Sand*, Mr. Scully, in writing of the great Springbok migrations, says:

"It is many years ago (1898) since millions of them crossed the mountain range and made for the sea. They dashed into the waves, drank the salt water and died. Their bodies lay in one continuous pile along the shore for over thirty miles, and the

stench drove the Trek-Boers, who were camped near the coast, far inland." This remarkable incident occurred in Namaqualand.

The name Springbok arose from the habit of these bucks when startled or at play, leaping high into the air with body curved, legs held stiff and close together, and head down; at the same time the line of long white hair on the rump is displayed like a fan by the action of certain skin muscles.

It is a most interesting and pleasing sight to see this sudden and momentary blaze of white flash out upon the veld when a herd of Springboks are disporting themselves or preparing to retreat. Their pace is great, exceeding that of a good horse, but they are no match in speed to a Blesbok or Greyhound.

When startled, a herd of Springboks, after a few preliminary "pronken," as the Boers call these leaping displays, make off full speed up-wind. They are very suspicious of roads or wagon tracks across the veld, and clear them at a bound, springing 10 to 20 feet with the greatest ease.

The South African veld is known as the Karoo-veld, and the grass-veld. The former is covered with low stunted bushes chiefly belonging to the orders *Compositæ* and *Portulacaccæ*, and the latter is clothed entirely with grass.

In the Cape Province we find the Karoo-veld, and further north and east the grass-veld prevails.

The Springbok thrives alike upon the nutritive Karoo shrubs, or upon grass.

When water is available these bucks drink every second day, but when it is unobtainable they are able to exist comfortably without it for a considerable time. This is somewhat remarkable, for the vegetation of the Karoo is not, as a rule, of a very succulent nature, and for months at a time it presents a parched, dry appearance; so much so that the inexperienced tourist is surprised to learn that animals thrive upon it.

The Springboks, like most other veld-roving antelopes, often resort to the various salt pans under cover of darkness to lick the salt-impregnated limestone and surface incrustations of salt.

In the past this antelope was one of the chief sources of food of the Bushmen and Hottentots.

The Springbok is easily tamed, and thrives well in captivity. It is, in consequence, seen in most Zoological Gardens.

A young male, which a friend caused to be castrated, developed the slender horns of an adult female.

The gestation period lasts about 171 days, and the lambs are born chiefly during the month of November; in South-West Africa it is somewhat later. One young is usually produced at a birth, and twins occasionally.

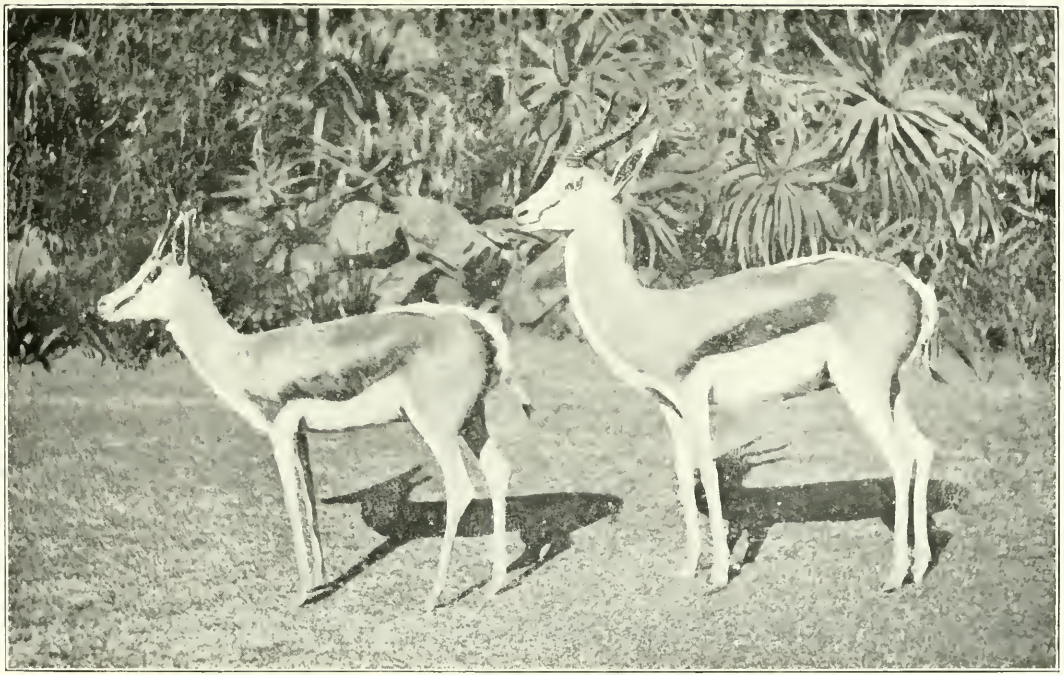
The flesh of the Springbok is most excellent, and is greatly sought after.

This antelope could, with advantage, be thoroughly domesticated and bred as a food animal.

An adult ram in good condition weighs 70 to 80 lbs., and measures about 30 inches at the shoulder. The general colour of the fur on the back is bright cinnamon or rufous-fawn, and the face, throat, underparts and inner sides of the limbs are pure white. A small patch of fawn is present between the horns, and a streak of rich chestnut runs down each side of the face from the eyes nearly to the corners of the mouth. The rufous-fawn of the back is separated from the white of the under parts by a broad lateral stripe of deep chestnut-brown. From the centre of the back to the tail is a fold or narrow pouch which runs down to the root of the tail. This is lined with long, snowy-white hairs.

On a farm at Carlton in the Cape Province there are several Springboks which are pure white, with the exception of the streaks on the sides of the body and face. These are light buff in colour. The Port Elizabeth Museum possesses a good mounted example of these albinos. Another specimen in the Museum is snow white without any trace of brown or buff.

The female Springbok is horned. The lambs, at birth, are yellowish-grey with the side stripes rather inconspicuous.



The Springbuck. Ram and ewe.

When the white man set his foot on South African soil the Springbuck swarmed over the karoo in uncountable numbers.

A pair of Roan antelopes and calf from Southern Rhodesia.

[See page 105]

THE BLUEBUCK OR BLAAUWBOK

(*Hippotragus leucophæus*)

This antelope formerly inhabited the south-western portion of the Cape Province, but was exterminated by the early settlers more than a hundred years ago.

Mounted specimens are on exhibition in the Museums at Paris, Vienna, Leyden, Stockholm and Upsala.

The Bluebuck was a near relative of the Roan Antelope, and no doubt originally sprang from the same stock.

It is somewhat surprising that its habitat should have been so restricted. No doubt in the distant past a herd became separated and pushed its way, or was driven to the south, and subsequently developed the characteristics which justified naturalists in naming it a distinct species.

The last-known specimen was killed about the year 1799.

The following interesting account of the extinct Blaauwbok (*Hippotragus leucophæus*) has been kindly contributed by Graham Renshaw, M.D., of Manchester.

"The proposal lately put forward to massacre

big game from aeroplanes has once more served to draw attention to the destruction of wild life during the last hundred years. The subject of this notice was the first of Africa's splendid fauna to disappear: so early was it exterminated that it has remained unknown save to a very few naturalists, and for every person who has heard of the Blaauwbok there are probably thousands who have heard of the Dodo and the Great Auk. The museums of the world contain but five specimens, two of which have been studied by the writer.

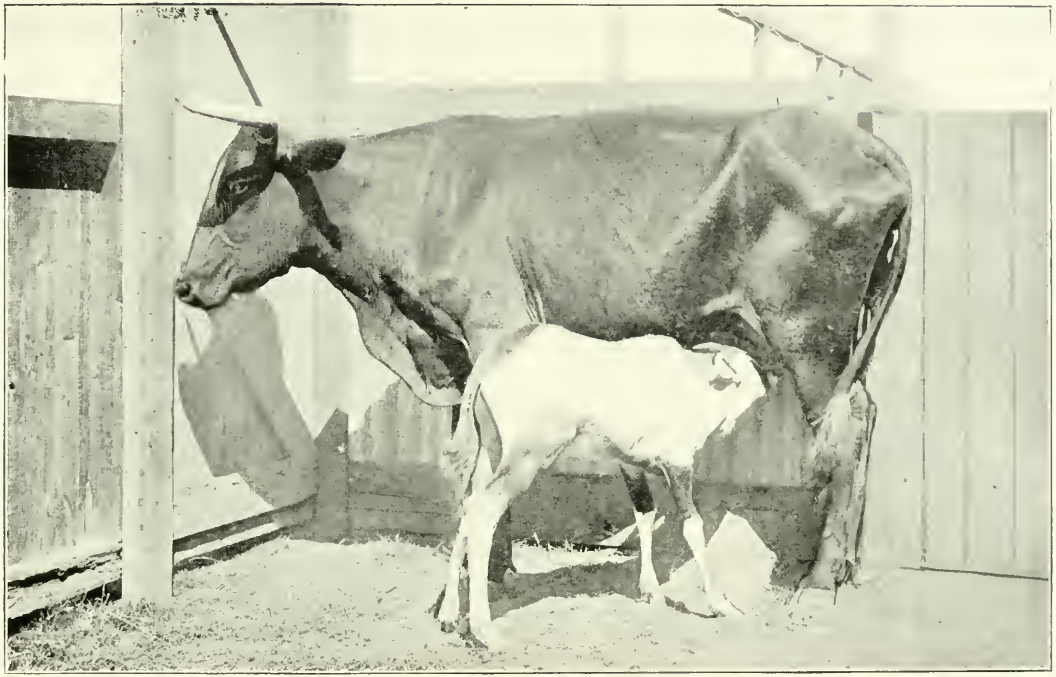
"The Blaauwbok (*Hippotragus leucophæus*, Pallas) was a fine antelope which stood about 45 inches at the withers: it was known as the 'blue goat' by the early settlers, in consequence of its curved, scimitar-like horns and its blue-grey coat: a spot in front of and below the eye was whitish, as were also the lips and the belly, and the insides of the limbs. Thus, although closely related to those conspicuously marked animals, the Roan and the Sable antelopes, the Blaauwbok was itself of subdued and somewhat indefinite coloration, a pale shadow of its bigger and more gaily robed cousins. So little indeed was its curious livery understood that the coat was reported to change colour after death: in the words of the old naturalist, Pennant, 'Colour, when alive, a fine blue of velvet appearance; when dead, changes to bluish-grey, with a mixture of white' (*History of Quadrupeds*, vol. i. p. 74).

"Although finally exterminated by the early

settlers, the Blaauwbok was probably already on the road to extinction when it was first mentioned by Kolben in his account of 'the present state of the Cape of Good Hope,' translated into English in 1731. The animal was then entirely confined to the province of Swellendam, in the south-west of Cape Colony—a district, by the way, famous as the last refuge of another curious antelope, the handsome Bontebok, which happily still survives. Thus, within the memory of the white man, the Blaauwbok has always been, to quote the naturalist, Le Vaillant, 'la plus rare et la plus belle des gazelles d'Afrique.' The original cause of its limited range and consequent rarity will probably never be known; for one may dismiss as highly improbable the stories of the colonists who, according to Thunberg, ascribed the scarceness of the Blaauwbok to the carelessness of the females, who were continually losing their young ones from the attacks of wild beasts. In studying the distribution of animals one often finds some apparently negligible boundary, such as a river, completely isolating a species from large tracts of country: thus, in the old days, the Blue Wildebeest did not occur south of the Vaal River, nor the Quagga to the north of it: similarly to-day we find the White Rhinoceros of the Ladak entirely confined to the west bank of the Nile. Some such boundary may have limited the range of the Blaauwbok: in any case this antelope and its congener the Roan give one more

example of the strange discontinuous distribution for which the fauna of Africa is remarkable. The Roan Antelope was not discovered till in 1801 Sir John Barrow's party journeyed north as far as Bechuanaland—thus, between the province of Swellendam in the south-west and Bechuanaland in the north intervened an enormous tract of territory in which neither Roan nor Blaauwbok nor any other member of their special group (the *hippotragine* antelopes) occurred at all. In Africa to-day the naturalist finds similar gaps in distribution in the family of oryx antelopes and also among gazelles.

"From the scanty field-notes available it appears that the Blaauwbok wandered singly or in small troops over the open veldt, probably in company of Springbok: indeed, Le Vaillant records that it was shortly after observing a herd of the latter animals that in December 1781 his attendant shot a Blaauwbok in the Valley of Soete Melk. His account of the affair is most interesting reading, and bears internal evidence of accuracy. The quarry when first seen was lying down: it was probably resting from the heat, for Le Vaillant says that when it stood up soon afterwards he at first mistook it for a white horse, till he saw the horns: this account being curiously corroborated by the late F. C. Selous, who, in writing of the allied Roan Antelope, says, 'when standing in an open plain, with the sun shining on them, they often look almost white, which accounts for the



A Gemsbok calf and its foster-mother. We often successfully reared the calves of the larger antelopes by using a cow as a foster-mother.

name of *White Sable Antelope*, by which they are known in many native dialects' (*Great and Small Game of Africa*, p. 409). Le Vaillant well understood what a prize he had obtained: he made a drawing of it on the spot, and his Hottentot attendant, who had secured the animal with a single shot, skinned it as expertly as he had shot it, Le Vaillant eventually bringing it to Europe on his return. The valley of Soete Melk was the property of the Dutch East India Company: Sir John Barrow described it as an extensive tract of land near the town of Swellendam, watered by the Zonder End River, and bounded to the north by a range of wooded hills. It was the last stronghold of the Blaauwbok: unfortunately it did not shelter any for very long after Le Vaillant's adventure, for some fifteen years later Sir John Barrow already supposed that the species was entirely 'lost to the Colony.' There was, however, a last flicker of the expiring candle: during 1796–1797 Sir John learnt that Blaauwbok had reappeared in the wooded hills behind the valley of Soete Melk. They lasted till 1800, when the last survivors were shot, and sent as skins to Leyden, though these specimens appear to have since been lost.

"Thirty-five years passed; nothing more was heard of the Blaauwbok; all that remained to attest that it had ever existed were five specimens preserved respectively in the museums at Leyden, Paris, Stockholm, Upsala and Vienna. The opening

up of South Africa revealed no more of the 'blue goat': Sir Andrew Smith's great expedition from the Cape to Bechuanaland added nothing to the scanty literature of the species. In 1836 Captain Cornwallis Harris, one of the most enthusiastic sportsmen naturalists that Africa has ever known, made his celebrated hunting trip 'into Southern Africa, through the territories of the Chief Moselekatse, to the Tropic of Capricorn.' Already long 'blotted from the book of life,' as Harris expressed it, the Blaauwbok had become a zoological myth: and although M. Geoffroy sent to Sir Andrew Smith a drawing of the Paris specimen, the latter declared that it merely represented a young Roan Antelope which lacked the usual chocolate-red on face and breast. For a genuine specimen of the 'Blue Antelope' Harris said he would have willingly given a finger of his right hand: he was sceptical, doubting if the species had ever existed, though in his book of adventures he mentions the example in the Paris Museum. Dr. J. E. Gray, after examining the actual specimen at Paris, agreed with his brother naturalists: the few Blaauwbok remaining in museums were declared to be but dwarf or immature examples of the Roan Antelope. Finally, however, the Blaauwbok was resuscitated by two Continental naturalists—Sundevall of Stockholm, and Kohl of Vienna—who were able to study it at first hand from specimens in museums. Sundevall showed that the feet of adult Blaauwbok were

markedly smaller than even those of immature Roan: while Kohl published a valuable paper, *Ueber neue und Seltene Antilopen*, in which he clearly demonstrated the essential differences between the two.

"It was with considerable interest therefore that the writer some years ago examined the classical example—the type specimen described by Pallas in 1776, and now preserved in the Leyden Museum. By the kindness of the late Dr. Jentink the glass panelling was removed: the measurements then taken gave a height at the withers of $49\frac{3}{5}$ inches, and a length (tip of muzzle to root of tail) of $73\frac{1}{5}$ inches: the horns were beautifully curved, annulated with thirty-five rings, and had a length of $24\frac{2}{5}$ inches. The neck mane was very slight and directed forwards: there was no throat mane. The specimen had been well mounted in its day, and was an adult male, in very good preservation.

"The Paris specimen was more puzzling. Preserved in the museum of the Jardin des Plantes, it at first sight indeed resembled a small, faded specimen of the Roan Antelope: closer study, however, revealed the comparative length and slenderness of the horns, the absence of any black area on the face, and the relatively short ears. In the glass case a big Roan Antelope stood next to it: comparison of the Blaauwbok's slender horns and subdued coloration with the ibex-like weapons, huge tufted ears, upright

mane and pied face of the roan demonstrated the characteristic differences beyond dispute.

"On the coat of the Paris Blaauwbok the famous bluish-purple tint still lingers, and owing to the care with which the specimen is housed, will probably continue to do so for another century. It reminds the writer of the exquisite satiny gloss seen on well-kept menagerie specimens of the Sable Antelope, besides recalling the changeable iridescence occurring in the Roan. As regards the supposed *post-mortem* change of colour it is certainly true that some structures—such as the lilac breast-feathers of the Gouldian finch—undergo alteration after the death of their wearer: but on this point Le Vaillant expressly says, 'I did not observe, as Dr. Sparrmann says, that this antelope when alive resembles blue velvet, and that when dead the skin changes its colour: living or dead, it appeared to me always alike. The tints of that which I brought with me never varied' (*Travels in Africa*, vol. i. p. 133).

"The best explanation of the supposed colour change is that of Harris, who long ago pointed out that in the Roan at any rate the actual hide during life is black, changing to brown after death: similar fading in the skin (not the hairy coat) of the 'Blue Antelope' would explain the post-mortem change to 'leaden colour'—the actual blue-grey of the coat being dimmed by the faded hide beneath. Many antelopes, when age has thinned their coat,

exhibit a bluish appearance due to the underlying hide: and if we suppose—not unreasonably—that the first 'Blue Antelope' shot was one which, by age and infirmity, fell an easy victim to the antediluvian weapons of the colonists, such a specimen would exhibit the 'blue velvet' appearance in the highest degree."

The Bluebuck was a large antelope, the male standing 45 inches, and the female 40 inches at the withers. The general colour was bluish-grey.

This extinct antelope must not be confused with the little bush-frequenting Bluebuck or Blaauwbokje, which is so common in the forests of South Africa.

THE ROAN ANTELOPE

(*Hippotragus equinus*)

Bastard Gemsbok of Cape and Free State Dutch; Bastard Eland of Transvaal Dutch; Kwar of Masarwa Bushmen; Mtagaisi of Swazis and Zulus; Klabakila of Basutos; Itaka of Matabele; Qualata of Northern Bechuana; Taihaitsa of Southern Bechuana; Qualata Tseu of Barotse; Kwar of Masarwa; Kwalata and Etselta of Ngami; Ukamuhwi of Makuba; Impengo etuba of Masubia; Ipewa of Chilala and Chibisa; Ipalapala chena of Makalakas; Chilumbulumbu of Chila; Wunderbi of Abyssinians; Abu Aruf of Dinka and Arabic; Palancca of Angola; Amōn of Sudani; Da ǂevoi of Mandingo; Gwenki of Hausa.

The Roan Antelope inhabits Africa north of the Vaal and Orange Rivers to Abyssinia, and the

Sudan on the east, and Nigeria and Senegambia on the west, except in the region of the great Congo forest.

Like most other animals distributed over a wide extent of country, the Roan Antelope differs more or less from the typical form or kind originally described from South Africa. There are several of these geographical varieties or local races which, for convenience, have been given sub-specific names.

The Roan associates in small troops of five or a dozen individuals. There is usually one bull to a herd of cows, but occasionally two adult bulls may be observed in a troop of about a dozen cows.

Old bulls, which have been driven out of the herds, are often found living solitary lives.

They frequent alike the high veld, the treeless, grassy valleys and hills, as well as country sparsely covered with bush. When frequently persecuted, they take to the forests and live there.

They are grass feeders, and drink at regular intervals.

Selous states the first calves are born in South-East Africa from the third week in January to the end of February. The young calves are very like those of the Sable Antelope, and are often mistaken for them. They differ in their somewhat lighter colour, longer ears and the face markings.

When wounded and brought to bay the Roan

Antelope bull fights fiercely for its life, often charging savagely with lowered head at its enemies. So sudden is the charge, and so effectively does it use its horns, that great havoc is sometimes occasioned amongst a pack of dogs when it is attacked by them.

Selous regards the flesh of this antelope as superior to even that of the Eland, Gemsbuck or any other South African antelope.

The Roan is fleet and enduring, so much so that it can seldom be overtaken by a well-mounted hunter if unwounded. If the horse should be exceptionally good, and well trained to veld work, this antelope may—after a most exhausting chase—be overtaken, but it is necessary to tax the strength and endurance of the horse to the utmost.

The Roan Antelope stands about 54 inches at the withers; it is pale brown in the upper parts, becoming darker towards the rump; head dark brown, almost black; white patches below, above and in front of the eyes. The nose and lips are also white. Horns shorter and more robust than those of the Sable Antelope.

The female is horned.

Average weight of a Roan bull is 600 to 630 lbs.

THE SABLE ANTELOPE

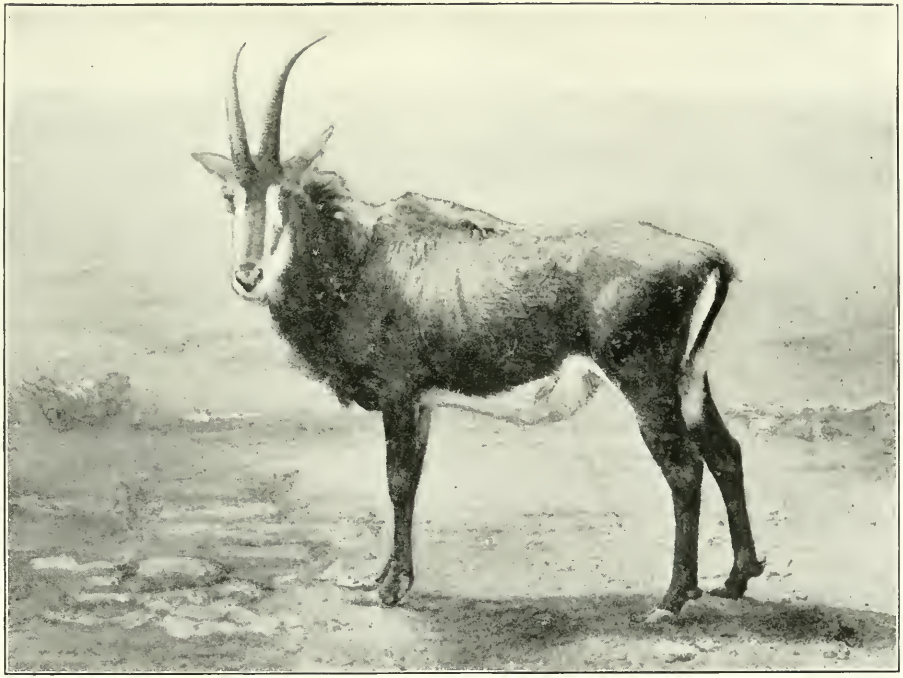
(*Hippotragus niger*)

Zwart-wit-pens of the Boers; Impalampala of Zulus and Swazis; Potoquani of Southern Bechuana; Solupe of Masarwa Bushmen; Qualata inchu of Bamangwato and Makololo; Umtjieli of Matabele; Palahala of Basuto; Impengo of Masubia; Ukwa of Makuba; Pala-pala of Makalaka; Kwalata n'tso of Barotse; Qualata Tshumu of Ngami; Mperembi of Chilala and Chibisa; Kantanta of Chila.

The Sable Antelope, which is known to the Dutch-speaking colonists as the Zwart-wit-pens, inhabits Africa from German South-West through western Bechuanaland, and the northern portions of the Transvaal to Mozambique, and northwards as far as British East Africa on the eastern side and Angola on the west. Although common both east and west in the bush country and Game Reserves of the Transvaal, it does not exist south of the Crocodile River.

This handsome antelope associates in herds of six, eight, ten, twenty to fifty individuals, consisting usually of one adult bull and the rest cows, immature males and calves. The other adult males which have failed to vanquish the herd bull live solitary or in groups of three or four.

The Sable frequent districts thinly covered with bush in which grassy valleys and small streams are plentiful. When persecuted they retire to the more thickly wooded districts which are usually



Photo, W. S. Berridge, F.Z.S.

The Sable antelope. Immature female.

found in the low country. Unlike many of the other large antelopes they never resort to the open, treeless plains. They travel great distances at times in search of young green grass, but always keep in the vicinity of the open forest. Being a regular drinker, the Sable is never found far from water. On the approach of the mating season the bulls start a series of duels, fighting with the greatest fierceness and courage. The long, curved, sharp-pointed horns are used with such deadly effect that numbers are slain in these annual fights for the leadership of the herd.

When wounded and brought to bay the bull Sable usually lies down, and should dogs be rash enough to rush in to close quarters he, with a few swift strokes from side to side with his formidable horns, plays great havoc with them. Even lions are at times slain in combat with this bold, tough fighter of the antelope tribe. So well known in the lower animal world is the prowess of the Sable bull that carnivorous animals other than the Lion rarely venture to attack him.

In captivity the Sable thrives well and is easily tamed. A friend succeeded in rearing two Sable calves by suckling them from a domestic cow. The bull Sable in captivity is likely after a time to become dangerous, and is apt to attack any one venturing into its enclosure other than the keeper who feeds it.

When running the Sable arches its neck, showing

off the fine curved horns to great advantage. It is very fleet, but can easily be run down by a well-mounted man. It is impossible, however, to overtake a Sable, unless heavy in calf, on an ordinary South African shooting-pony.

The period at which the calves are born appears to vary. In South-East Africa, according to Major Stevenson-Hamilton, it is usually in January and February, and in Rhodesia mostly during November and December. F. C. Selous states the bulk of them calve during September and October. The calving period would thus seem to extend from about September to February, varying according to the part of the country inhabited by this antelope.

They breed freely in captivity when allowed to run in a large enclosure.

The Sable averages about 50 inches at the shoulders, although a herd bull may attain a height of 56 inches.

The upper parts of the body and legs are dark reddish-brown of varying shades to black in the adult males. The under parts and portions of the face are white; neck maned; tail long, with tuft of black hair at the end.

The female is horned.

THE GEMSBUCK

(*Oryx gazella*)

Kukama of Bechuana and Makalakas; Ko of Masarwa Bushmen; Icowa of Amaxosa; Kukama of Bechuanas and Bakalahari.

The Gemsbuck or Gemsbok was formerly common all over the Karoo-veld of the Cape Province, but is now only found in the north-west corner of the province in small numbers. It is still met with on the desert-like plains of Bechuanaland, South-West Africa, and in the Kalahari, where it is still fairly plentiful. North of the Zambesi it extends as far as southern Angola.

The Gemsbuck is a desert-loving antelope, and is unknown on the fertile eastern side of Africa. They associate in pairs or small family parties, and never in large herds. The late Mr. F. C. Selous mentions having seen as many as fifteen, and Gordon Cumming twenty-five in a troop. This was in districts where they had not been persecuted.

They inhabit the dry waterless wastes, or open plains dotted with stunted bush; and even in the early days before the hunter with his firearms appeared, they apparently limited their range to the arid regions of South-West Africa.

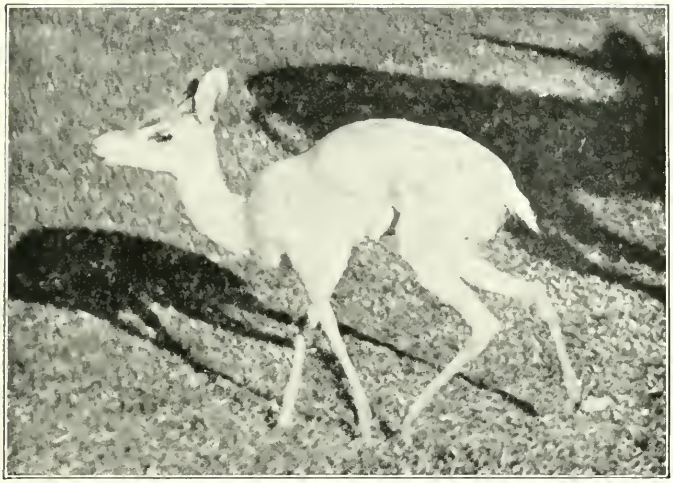
The digestive organs of the Gemsbuck are modified in such a way as to be able to extract sufficient nourishment from parched and scanty vegetation for the needs of the animal. Even in the most

arid parts of the Kalahari, when the sparse and stunted vegetation is dry and shrivelled after a prolonged drought, the Gemsbuck thrives, and even grows fat upon the scanty pickings. Although it will drink if water is available, this antelope is able to exist for long periods without water, and is stated by some authors to be quite independent of it. They usually obtain sufficient water from the wild water-melons which thrive on the sandy wastes, and the watery bulbs which are widely distributed in the dry habitat of the Gemsbuck. These bulbs are dug out of the ground by the animal with its hoofs.

When wounded and bayed by dogs, the Gemsbuck lies down and uses its horns with terrible effect on any dogs which might venture near. It is stated that even lions have been transfixed by the sharp, straight horns of this antelope. The Lion in its death agony kills the Gemsbuck, and their bleached skeletons bear testimony to the fierceness and deadly nature of the combat. When viewed sideways at a distance, the Gemsbuck appears to possess only one long, straight horn. It is, therefore, thought that the Unicorn of Mythology is this antelope or its near relative the Beisa.

Old bull Gemsbucks which have been driven off by younger rivals are often met with roaming about alone.

The flesh of this antelope is excellent; its skin is remarkably tough and strong, and is much



The Damaraland Dik-dik. The Dik-dik is about the same height as the tiny blue Duiker, but is more slenderly built.

[See page 64]

Young Gemsbok on the high veld at Vryburg.

sought after for making whip-lashes, raw-hide thongs and harness.

Although fleet, the Gemsbuck can usually be run down by a well-mounted man; but when not burdened with fat they frequently succeed in exhausting even the best of horses.

I have succeeded in rearing Gemsbuck calves, a domestic cow acting as foster-mother.

The Gemsbuck is fawny-grey on the back and sides; the white of the under parts is separated by a broad, dark stripe extending from the flanks along the side to the fore-legs; the backs of the fore- and hind-limbs are white, and the face parti-coloured.

The height at the shoulder is about 45 inches.

The female is horned, and the horns, although thinner than those of the male, usually attain a greater length.

THE BUSHBUCK

(*Tragelaphus scriptus*)

Imbabala of Zulus, Amaxosa, Swazi, Matabele, Barotse, Batonga and Masubias (the Zulus and Amaxosa when desiring to distinguish the male from the female call the former Inkonka); Iscolobutuku of Bamangwato; Ibawara of Lower Zambesi tribes; Ungurungu of Makuba; Dol of Somali; Chiwalawala of Chilala and Chibisa; Abu Nabah of Sudani; Assali of Danakil; Bata of M'Kua; Mbawara of Swahili; Mazo and Bŭlŭmgito of Hausa; Ngabi of Waganda; Decula of Abyssinia; Shichibange of Chila.

The Bushbuck, or Boschbok of the Dutch colonists, inhabits the forest regions from the coastal districts of the Cape Province up through Africa to Abyssinia.

The Bushbuck, as its name implies, is a bush-dwelling antelope. It is one of the most nocturnal of South African antelopes, and is solitary by habit, except during the breeding season, when a pair with their last lamb may be seen. I have sometimes surprised an adult ram with several ewes feeding in a forest glade. On one occasion, requiring the skin of a Bushbuck ram for making lashes for wagon whips, we beat an isolated patch of dense bush on a friend's farm, and eleven ewes, a few half-grown males, and only one big ram emerged. The rams are very pugnacious, and

The typical Bushbuck of the Cape Province. Ram, ewe, and fawn.

will not tolerate another adult of their sex in their neighbourhood. During the mating season they fight in a most determined manner, and these yearly conflicts for securing wives end in death to considerable numbers of rams. I came upon a helpless ram one day. He had been terribly gored, and was gashed in a score of places. The game old fellow made a vain endeavour to rise and charge me. The ground and herbage around was trampled and splashed with blood.

The Bushbuck produces its young in the spring and summer months, usually from the end of September to about the end of the following February. In the coastal parts of the eastern portion of the Cape Province, if not elsewhere, the Bushbuck breed all the year round. This is, no doubt, due to the vegetation being in a green and succulent condition at all times of the year.

It will thus be seen that with this antelope, as with others, the breeding times vary according to the district and nature of the environment.

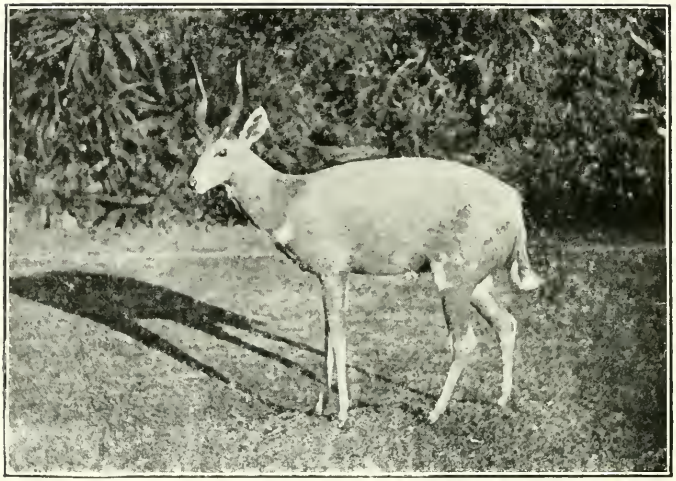
During the daytime they lie in the thick bush, usually on the fringes of the forests. When disturbed they plunge into the innermost recesses of their bushy home.

The Bushbuck selects some particular haunt in a quiet part of a forest, isolated clump of scrub, or in the thick bush which so frequently grows along the borders of streams. Here it makes its home, emerging during the early mornings and evenings

to feed upon leaves, shoots, berries, tender grass and roots. The latter it digs up with its hoofs. I have known Bushbucks inhabit the same haunt for a continuous period of ten years.

On a friend's estate in Natal there happened to be a particularly dense, sheltered and secluded patch of bush. In this cover an old Bushbuck ram had his home. He was shot, and every season for many years a Bushbuck ram was found and killed in this patch of bush. Although, in the neighbourhood, a number of ewes inhabited the forest, none of them were ever found in this particular haunt. The Bushbuck ram is usually a dangerous animal to approach when wounded. I have witnessed many dogs and several men being either killed or seriously wounded by these antelopes. On one occasion a Bushbuck ram was driven from a patch of bush and wounded by a young farmer. It made off up a small, blind kloof. The young man, heedless of our warnings, went in after it. In a short while we heard a double shot and then silence. Making our way up the donga we found our friend and the Bushbuck dead ; the latter's horns had been driven in an upward direction through the abdomen right up to the heart.

On another occasion a ram was badly wounded, and succeeded in reaching a patch of bush into which it disappeared. Being some distance off, the excited young man who had shot the buck did not hear or heed my warning calls, and dashed



A Bushbuck ram from Bushy Park near Port Elizabeth.

Thigh bone or femur of a Bushbuck ram, shewing natural healing of a bad fracture. The thigh bone was smashed by a rifle bullet. The wounded buck escaped, but was killed the following season; the broken bone was found to be healed in the manner shewn.

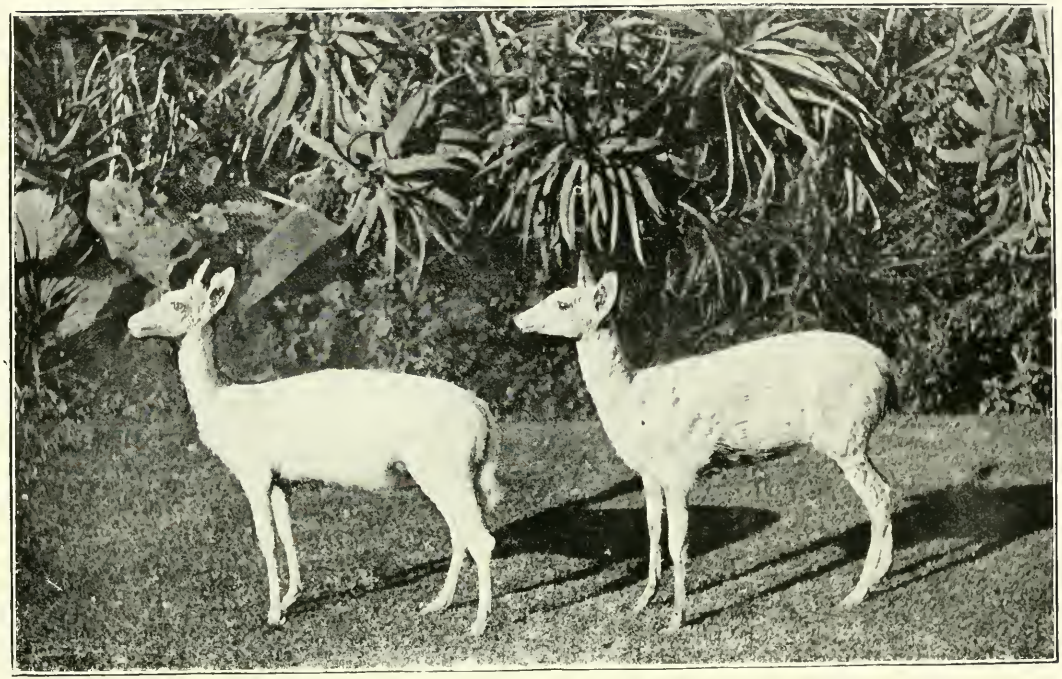
after the buck. We found him later lying on his face dead. The buck had driven its horns once into his side and twice through the back. A Kafir had his thigh laid open from above the knee to the hip by a single side-stroke of a wounded Bushbuck. As the animal dashed at him the man stepped aside, and the instant the horn caught him he drove the blade of his stabbing assegai into the buck behind the shoulder through its heart. The stroke was a magnificent one under such difficult and trying circumstances.

In a small glade in a forest in Natal I stumbled over an adult Python (*Python sebæ*) and fell flat upon it. Turning a few rapid somersaults I got out of reach of its coils and scrambled to my feet. There was no occasion, however, for alarm, for the great snake, which I subsequently found to be 18 feet in length, was in a dying condition. Its back had been broken, and its body was punctured and ripped in several places. Near-by lay the dead body of a Bushbuck ram. On examination it was apparent that it had been strangled by the Python. On one of its fore-legs there were marks of the reptiles recurved teeth, and on close inspection several teeth were found sticking in the skin. Examining the ground around, I noticed the spoor of a Bushbuck doe and that of a fawn which seemed to be about six months old. The whole scene was made clear: the Python had evidently seized the fawn, and its cries, and perhaps those of its mother,

had brought a ram to the rescue, and a terrible battle was fought. It was apparent the great snake had gripped the antelope's leg with its jaws, and eventually succeeded in strangling its foe by throwing one or more coils around its neck, and applying its powers of constriction, which in so large a snake are immense. The fawn was nowhere to be seen, but the spoor which I traced for a short distance indicated the intended victim had got away on three legs, and that it was otherwise badly hurt.

In situations where the Bushbucks are not molested, the observer, if he is well concealed, may see two or three ewes, perhaps with fawns, come timidly out of the forest during the late afternoon before sundown. After the sun dips down behind the distant hills, a cautious old ram will usually make his appearance. He evidently waits for his wives to ascertain if the coast is clear before venturing forth into the open. These antelopes rely more on their senses of smell and hearing than on sight. On the slightest suspicion of danger, the ewes with a loud warning bark dash back into the forest.

Bushbucks are still fairly plentiful in most of the bush country of South Africa, owing chiefly to a close season being observed, and to farmers preserving them on their farms, and thus preventing the natives from trapping and hunting them down, which they do in and out of season on Government



Albino Bushbuck ewes from the woodlands near Port Elizabeth.
The one on the right is white with a brownish tinge ; the other is snowy white.

lands. There is no greater poacher in existence than the South African kraal Kafir.

A friend in Natal, who had a large patch of dense forest enclosed by a high fence, was able not only to keep his household in venison during the game season, but to send a considerable quantity to market. He shot off a certain number of male Bushbucks each year, and spared the ewes to breed. He was always careful to shoot the rams before they became too pugnacious, and in this way prevented the males killing one another in combat.

There are several albino and partial albino Bushbucks in the Port Elizabeth Museum. One which is parti-coloured had eyes of a sky-blue colour. This is an immature male. Old rams invariably have robust necks, and are dark brown in colour. A few years ago we received at the Port Elizabeth Museum, from the neighbourhood of Port Elizabeth, an old ram with exceptionally fine horns, which had a long, thin neck and reddish coat approaching that of the ewe in colour. Although the neck was slender, the body was fat and well-developed.

There is another fully-developed Busbhuck ram in the same Museum of a uniform bluish-ash colour, otherwise known as dove colour. I have frequently noticed a deposit of iron pyrites on the teeth of Bushbuck rams. So thick is the accumulation at times that it can be removed in flakes.

In captivity the females become tame and docile,

but the males on developing into the fully adult condition usually become vicious and more or less unmanageable. Even when taken into captivity at the age of a few months the males should not be trusted after they are fully adult. One which I had in captivity was as quiet and docile as a sheep, but one day without provocation it savagely attacked me, and was afterwards most erratic in its behaviour.

The height at the shoulder of an adult male varies from $2\frac{1}{2}$ to 3 feet, and the weight ranges from 100 to 170 lbs.

The Bushbuck varies more or less in coloration throughout its extensive habitat, and is, in consequence, separated into several local races or subspecies. Even in the same district the colour and markings often differ more or less. The typical species and local races inhabiting South Africa south of the Zambesi are the following:

(1) The Harnessed Bushbuck (*Tragelaphus scriptus scriptus*) inhabits Africa from the neighbourhood of the Zambesi up the western side, and also South-Central and Central Africa. It is the typical species. The prevailing colour is bright rufous in the male, dotted over with a considerable number of conspicuous white spots, and transverse and longitudinal stripes of the same colour, and a blackish mane is present on the chest.

(2) The Cape Bushbuck (*Tragelaphus scriptus sylvaticus*) is the local race which inhabits the Cape Province, Natal and Zululand. The adult male is

dark brown with a few white spots on the haunches and no transverse stripes, except perhaps from two to four very faint ones on the back or rump. The female and young are similar in their markings, but the general colour is rufous-brown, and not blackish as in the adult ram. Occasionally traces of transverse white stripes on the haunches are present in very young fawns, at least in the neighbourhood of Port Elizabeth.

(3) Gordon Cumming's Bushbuck (*Tragelaphus scriptus roualeyni*) is the local race which prevails from the Limpopo valley through Eastern Rhodesia, Nyassaland and East Africa to Mombasa. It is dark brown in the male with two or three faint indications of white transverse stripes on the rump. The haunches are spotted with white, and are slightly more abundant than in the Colony Bushbuck. The female is lighter in colour.

The colour and markings of the Bushbucks merge so gradually into one another that it is a most difficult matter to define the range of each, especially so owing to the prevalence of so many intermediate forms.

The female Bushbuck is smaller than the male, is less robust in appearance, and does not possess horns except rarely as abnormalities.

The flesh of the females and immature males is fairly good, but that of adult rams is rather dry and tough.

THE INYALA

(*Tragelaphus angasi*)

The Harnessed Antelope; Angas's Bushbuck; Inyala of Zulus and Amatonga; Bo of Nyasaland.

The Inyala or Bastard Kudu of the Dutch colonists inhabits South-East Africa from the Ingwavuma River in northern Zululand to Beira and the vicinity of the Shire River in Nyassaland. According to the *Records of Big Game* for 1914, it also occurs in Angola on the west coast.

Another species, known as the Mountain Inyala (*Tragelaphus buxtoni*), inhabits the Sahatu Mountains of north-western Gallaland.

The Inyala usually frequents the low-lying, dense forest country, and seldom strays far from water, of which it drinks frequently, as often as three times in the twenty-four hours during the dry season.

In Portuguese East Africa Inyala are found at least sixty miles from water, and Mr. Cecil Barnard, a big-game hunter, tells me they can exist for months without drinking.

In these thick, damp, tangled forests these antelopes live in small troops of one adult male and about half-a-dozen females. At other times the females with their young and the immature males herd together; the adult rams wandering about singly or in small groups. When the young are about to be born, the does wander off alone. Herds of as

Inyala. Ram and ewe.
The Inyala is a link between the Bushbuck and Kudu.

many as a dozen does and three or four adult rams are occasionally seen together in the Game Reserves of Zululand, which are the headquarters of the Inyala.

In districts outside these Reserves, the Inyala is becoming scarcer every year. They are still fairly abundant along the wooded banks of the Sabi River in Portuguese East Africa. The horns of the male Inyala are in great request, and the flesh of both sexes is highly esteemed.

These antelope feed upon the bean-pods of acacia trees, leaves, tender shoots, wild fruits, berries and young, tender grass. The sections of the forest selected by the Inyala for its home are those portions which are very dense, with an abundance of tangled undergrowth. Like their relative the Bushbuck, they are nocturnal, resting during the daylight hours and issuing forth at night.

The principal mating time is in April. A single young one is produced at a birth, once annually, usually during the months of September and October, although some are born as early as August, and a few during the summer and autumn months until as late as March.

The call of the Inyala is a hoarse, deep bark like that of the Bushbuck, but louder and more intense.

Although its home is the dark, dense, thorny tangle, which apparently no animal other than a comparatively small one could creep or run through,

yet this large robust antelope glides under and through it with the greatest of ease, and the only chance the hunter has of a shot is when one happens to dart across some open space. The Leopard, Lion and Wild Dog are the principal natural enemies of the Inyala, although the Caracal, Serval and Honey Ratel prey upon the young ones when occasion offers.

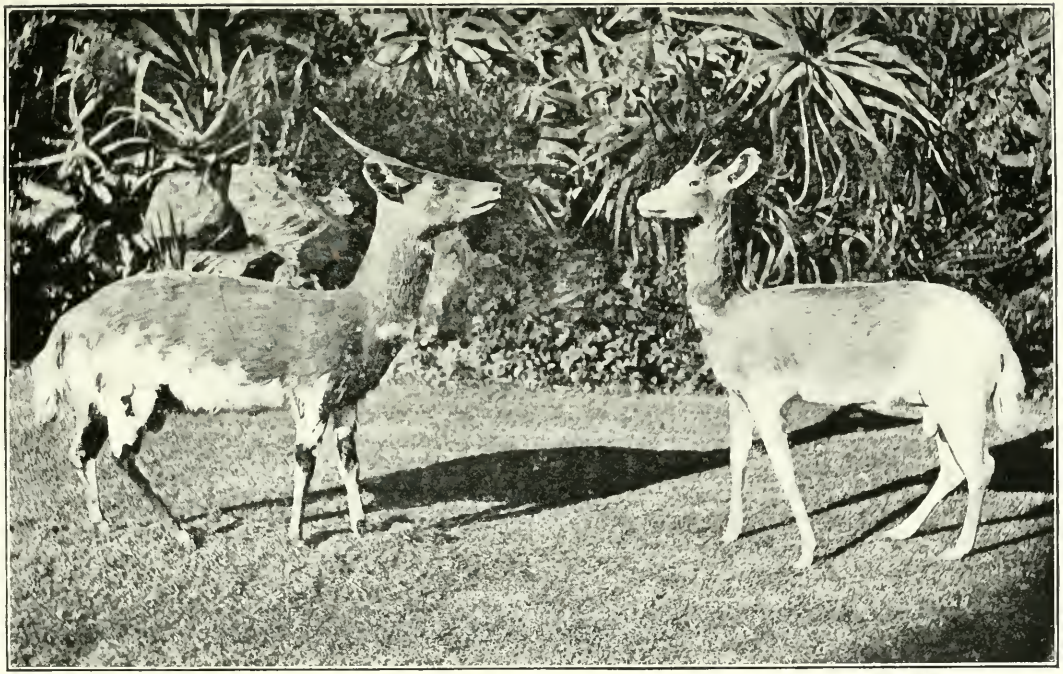
The male, when bayed by dogs, puts up a good fight, and being so quick with its horns, it is a dangerous animal for dogs to tackle.

The cattle plague known as Rinderpest, which swept through South Africa some years ago, destroyed large numbers of Inyala antelopes.

The flesh of this buck is excellent, and even that of the rams is good and tender.

The Inyala is a fairly large animal, standing about 3 feet 6 inches at the shoulder, and weighs from 250 to 300 lbs.

The hair on the male is greyish-brown or slaty-grey. A fringe of long hairs is present along the ridge of the back; the throat, under parts, and the back of the haunches on either side of the tail, forehead and round the eyes bright sienna-brown; a chevron-shaped white mark shows clearly on the nose; the cheeks are spotted with white, and the chin and the upper lips are of the same colour. Tail about 18 inches in length to the ends of the terminal hairs, bushy throughout, white below and black above, and at the tip. From the white fringe



Sports or Mutations. [See page 120]

On the right—Parti-coloured, half-grown Bushbuck ram. The hind-quarters, under parts, legs, and face are pure white ; the neck, back and sides are light brown, and the eyes are sky blue.
On the left—Parti-coloured Bushbuck ram with abnormally short legs.

of long hairs along the ridge of the back run about five white transverse lines which encircle the barrel.

The female is smaller than the male, lacks horns, and is bright reddish-chestnut, approaching orange in colour, becoming somewhat paler below and on the insides of the hind-limbs. A black line runs from the crown of the head along the ridge of the back to the tip of the tail. From this, twelve to thirteen transverse white stripes run round the barrel. Tail rufous above, white below and black at the tip; white spots on the cheeks and thighs. Height at the shoulder 18 inches. The young are like the female in colour, but are more spotted and paler.

THE SITUTUNGA

(*Tragelaphus spekei selousi*)

Situtunga of the Barotse; Nakong of Bechuana and tribes in vicinity of Lake Mgami; Zowi of Chilala and Chibisa; Situtunga, Puvula, and Unzuzu of Chobi and Central Zambesi; Njobi of Waganda; N'zoi of Lakanga; Kawi of Cameruns; Mluri of Duala; Nkaya and Nkoko of Congo; Shichinzebe of Chila.

The Situtunga, otherwise known in South Africa as the Waterskaap or Waterkudu, inhabits the vast papyrus and reed-swamps which border the shores of lakes and rivers of South-Central, Central and East Africa.

A local race or sub-species (*Tragelaphus spekei*

selousi) is found in the swamps between Lake Ngami and the Chobe, as well as along its marshy and reed-covered banks.

Beyond the Zambesi, the typical form or kind (*Tragelaphus spekei*) and two sub-species or local races occur (*Tragelaphus spekei gratus* and *Tragelaphus spekei albonotatus*). The range of the typical species is from the South-Central and Central portions of Africa, eastwards. The range of *T. spekei gratus* is Western Equatorial Africa. The range of *T. spekei albonotatus* is unknown (possibly Angola or Upper Guinea).

The hoofs of the Situtunga are greatly elongated, and are, in consequence, specially serviceable for a life in the swamps, for this animal leads what may be termed a semi-aquatic life. It is, in fact, the most aquatic of all the antelope tribe.

Living in small family parties or pairs, the Situtunga passes the daylight hours concealed in the reeds and papyrus; and the hours of darkness in feeding upon the young shoots. On solid, hard ground it is awkward and slow like a duck out of water, but in its marshy haunts it can progress with ease, swiftness and safety over the matted vegetation and through the water. It is sometimes driven from its hiding-places in the great swamps by firing the dead reeds after a long spell of dry weather. As the fire approaches, the Situtunga retreats over and through the marsh, often with a tremendous amount of splashing. During the

Photo, W. S. Berridge, F.Z.S.

A young specimen of a Situtunga. The Situtunga lives in the midst of vast papyrus swamps and reed beds.

seasons of heavy floods, the water in these vast marshes becomes so deep that the natives are able to paddle over them in their canoes, and successfully round up and spear the Situtungas.

To avoid their enemies, these antelopes often sink their bodies deep in the muddy water with only the nostrils above its surface. Concealed thus they will not move even should a canoe touch them in passing. Unless driven from its marshy haunts by fire or natives in canoes, the Situtunga is rarely seen. Occasionally a momentary glimpse of one may be obtained about sunset or after dawn on the edges on a reedy marsh. When driven on to hard ground it is possible to run down these animals on foot, so clumsy and awkward are they. In adapting this antelope for a semi-aquatic existence in marshy country, Nature has deprived it of the fleetness of foot so characteristic of the rest of the antelope tribe.

The flesh of the Situtunga is rank and unpleasant to the European palate.

This antelope was first met with in 1852 by Dr. Livingstone. The Situtunga is slightly larger than its close relative the Inyala, standing about 45 inches at the withers. In the typical species from the Victoria Nyanza neighbourhood, the full-grown males are greyish-brown and unstriped, and the females are rufous with rather indistinct body-stripes. In the western race or sub-species (*T. spekei gratus*) the male and female are, in colour

and markings, very much like the Inyala male and female.

In the little-known sub-species *T. spekei albonotatus*, the white face markings are larger.

The sub-species which occurs south of the Zambesi, and with which we are chiefly concerned, the adults of both sexes, unlike others of the same genus, are alike in coloration. This is rather remarkable, as the females of the typical race and the other local races differ considerably from the male.

The young ones are striped transversely with narrow white lines. The Situtunga may at once be distinguished from the Inyala by its hoofs, which are excessively long, and by the lateral or false hoofs which attain an unusual degree of development.

The female is hornless.

THE KUDU

(*Strepsiceros capensis*)

Iqudu of Amaxosa; Kudu or Koodoo of Hottentots; Umgaxa of Zulus; Itolo of Basuto; Itshongonono of Swazis; Tolo of Bechuana, Barotse and Ngami tribes; Noro of Mashonas; Dwar of Masarwa; Muziloua of Batonga; Unza of Mazubia; Unzwa of Makuba; Muziloua of Batonga; Izilarwa of Makalaka; Ngomo of Chilala and Chibisa; Godir of Somali; Tata of M'Kua; Nylat of Sudani; Agarzin of Abyssinia.

The Kudu inhabits Africa wherever the nature of the country is suitable, from the Cape Province to

the Sahara on the west. The region of the Congo is its northern limit. Eastwards it ranges into Abyssinia and Somaliland.

Pallas was the first man to name the Kudu from some mounted heads which he saw in the Leyden Museum, and he called it *Antelope strepsiceros*. The Latin word *Strepsiceros* was subsequently adopted as the generic name of this animal. Sir Andrew Smith, in the *South African Quarterly Journal* in 1834, was the first man to name the Kudu from complete specimens; therefore his specific name of *capensis*, we think, should be retained, as it is undesirable for the generic and specific names to be identical, if there are any reasonable grounds for setting aside the law of priority.

The Kudu, owing to Government protection, still exists in the forest-covered districts of the Cape Province from Riversdale and Prince Albert divisions, and eastwards to Albany and Fort Beaufort. It is met with in fairly large numbers in the bush-covered portions of the Uitenhage District, and along the Koonap and Great Fish Rivers. It also inhabits the wooded portions of the country in Prieska and Griqualand West.

There is, at present, upwards of 10,000 Kudu in the Cape Province. Outside this province its habitat includes South-West Africa, Bechuanaland, Rhodesia, the Transvaal, Zululand and Portuguese territory.

North of the Zambesi it extends to Abyssinia

and Somaliland on the east, and to Angola on the west.

The Kudu associates in small herds of five to a dozen, and occasionally a score of individuals composed of cows, calves and one or perhaps two adult bulls, if the herd be large.

After the mating season the younger males are permitted to join the herd until the next mating season, when the right to perpetuate the species has to be decided by combat.

Sometimes a small troop of old bulls are seen consorting together; and at other times they are solitary.

The calves are born principally during the midsummer months, although the time varies in different parts of the country.

The Kudu inhabits the dense forests, and the broad belts of bush bordering the rivers. They are particularly partial to rocky and stony hills covered with thorny bush.

Although their pace is not great or enduring in the open, yet in their forest home they are exceedingly expert and agile in eluding their enemies. Their senses of sight, hearing and smell are acutely developed, and on the slightest cause for alarm they make off at a swift pace through and under the tangled thorny scrub and rough, boulder-strewn ground.

The enormous and widely-stretched horns of the adult male would seem to be a severe handicap on

such a large animal when plunging through a forest. This, however, is only apparent, for the male, when dashing through the dense tangled bush, thrusts his nose straight out, and the massive horns lie close along the shoulders, and serve as a protection from the long, sharp thorns with which most of the forest trees are covered. In addition to their wonderful powers of flight through dense bush, they are able to leap obstacles at least 8 feet in height.

The food of this antelope, like that of its relatives the Bushbuck and Inyala, consists of leaves, shoots, berries, wild fruits, and roots and bulbs which it scrapes up. When water is available it drinks regularly, but is able to subsist for considerable periods without it.

The Kudu is exceedingly shy, timid and cautious in its bushy home, but when captured and kindly treated it soon becomes tame and confident. When caught young they can be tamed so effectually that they may be given their liberty and allowed to graze with the cattle. A friend had half-a-dozen which went out into the bush-veld every day with a herd of cattle, and returned with them to the kraal at sundown.

When wounded and bayed by dogs, the bull Kudu makes a more or less half-hearted fight; but beyond trying to keep off the dogs with its horns, it makes little or no attempt to inflict injury upon its assailants. Even in their seasonable combats for wives

the males rarely kill or even seriously wound one another. The enormous horns, beyond giving the male a majestic appearance, are not of great use to the animal. When alarmed, the Kudu, like the Bushbuck and Inyala, always prefer to go under rather than over obstacles in its path, the evident desire being to endeavour to escape observation as much as possible.

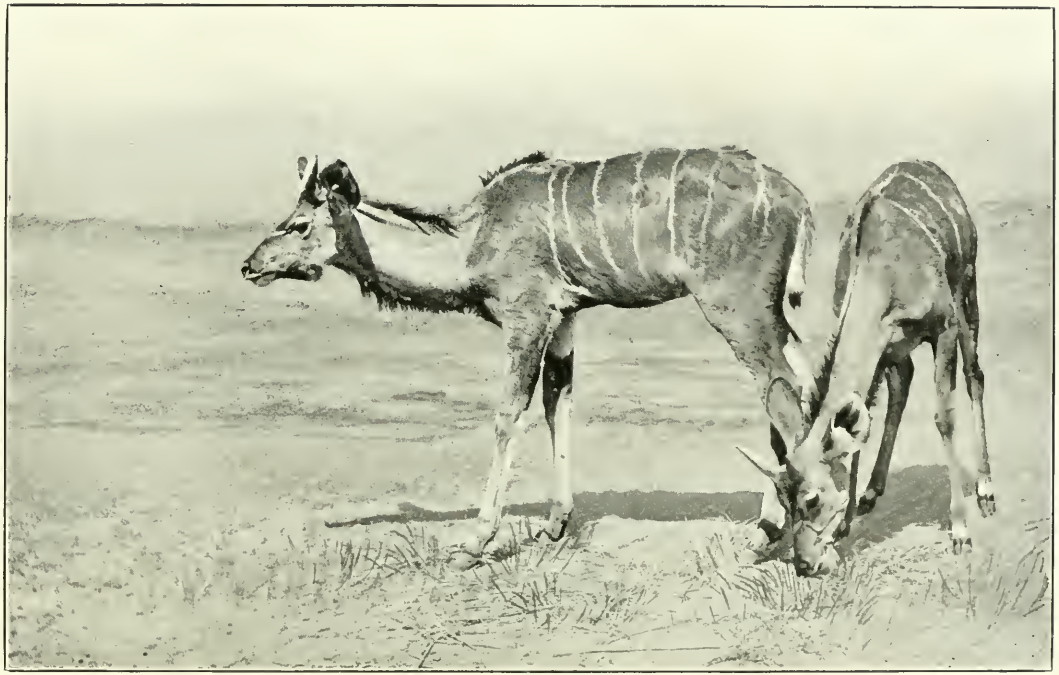
These antelopes migrate regularly to and from their winter and summer feeding grounds, and do not wander permanently to distant localities, except when persecuted.

The terrible cattle plague known as Rinderpest killed off large numbers of Kudus, which were highly susceptible to it, and for a year or two afterwards their skeletons were frequently found. A friend came across three skulls of old males, bearing magnificent horns, when this plague was raging through the country.

The hide of the Kudu, though unusually thin, is very tough, and is in great demand by colonists for making harness and reins. A friend has a set of Kudu harness which has been in use for over twenty years, and to-day it is as strong and good as when he made it.

The flesh of this antelope is most excellent eating, and the marrow in the bones is delicious.

The female is hornless, although on rare occasions stunted abnormal horns have been observed on them.



Young Kudus from the bush country near the Great Fish River in the eastern part of the Cape Province.

The Kudu male is as large as a horse, and his magnificent spiral horns give him a graceful and majestic appearance; and there is no finer sight in Nature than to see a herd bull standing amidst a mass of boulders with head erect and horns towering high in the air, listening intently and surveying his surroundings.

The cry of alarm is described as a loud, roaring bark somewhat like that of the Bushbuck, but louder. During the mating season, and when fighting, the bulls are often heard emitting a grunting sound.

An adult bull stands from 4 feet 10 inches to 5 feet at the shoulder. The prevailing colour is pale ashy-brown; a fringe of long hairs extends from the head down the middle of the neck and back to the tail; and another fringe runs from the chin down the middle line of the throat to the chest. Several narrow transverse white lines encircle the barrel.

The female is smaller than the male, but resembles it in colour, except that it is often of a browner hue.

In the young animals, the white body-stripes and spots are more conspicuous and in greater number.

Two local races are found beyond the Zambesi, viz. the Somali race (*Strepsiceros capensis chora*), which differs from the typical form in having only about five transverse white stripes, instead of nine or ten, as is usual. The other is the East African race (*Strepsiceros capensis bea*).

THE ELAND

(*Taurotragus oryx*)

T'ganna of Hottentots; Impofu of Zulus, Matabele and Amaxosa; Pofu of Basutos and Bechuana; Ipofu of Makalakas; Mofu of Mashonas; Du of Masarwa; Insefo of Masubia and Batonga; Moju of Galla; Mpofu of Barotsi and Ngami; Ntamu of Waganda; Msongo of Chilala and Chibisa; Uschefo of Macuba; Pakala of Makua; Mpofu of Swahili; Bŏggă of Sudani; Musefu of Chila; Moju of Galla.

The name of Eland was originally given to this animal by the Voortrekker Dutch colonists in South Africa, from its fancied resemblance to the European Elk (*Alces machlis*), Eland being the Dutch name of the Elk.

The name Eland for this African antelope is now in general use. The Eland was once common in suitable localities in South Africa from the Cape to the Zambesi. At the present time it exists in the feral or wild condition on the western border of Natal amongst the Drakensberg Mountains, where it is under Government protection. Owing to their ability to live for considerable periods without water, they exist in fairly large numbers in the waterless Kalahari, where hunters rarely venture. A few still survive in the Portuguese territory along its southern border, possibly into Zululand and in Southern Rhodesia. North of the Zambesi its habitat extends to Angola on the west, and British East Africa as far as the Tana River

in the east. A few individuals are preserved on farms in various parts of the Union.

Efforts should be made to domesticate and breed this large antelope as a food animal, as its flesh is one of the best of game meats.

The Eland varies in its colour-markings more or less like most other species of animals that have an extensive range. For instance, the Eland of the south is dun-coloured and unstriped; but northwards its coat becomes richer in hue, and the body is marked with white lines. The various local races into which Elands are divided for convenience merge so closely one into another that it is a matter of considerable difficulty to divide them.

The typical race (*Taurotragus oryx typicus*), which in former times ranged from the Cape to the northern zoological boundary, viz. the Zambesi, is uniform dun colour without transverse white body-stripes or a dark brown band above the knees.

Up towards the Zambesi the Eland is striped with narrow but clear transverse white lines on the body; and a blackish patch is present on the back of each fore-leg above the knee in adult bulls. To distinguish these Elands from the unmarked southern ones we call them the Zambesi race (*Taurotragus oryx livingstonii*). This race extends beyond the Zambesi into the heart of Africa and towards the east.

In East Africa we have another local race (*Taurotragus oryx patersonianus*) which does not occur

south of the Zambesi. In this race the sides of the head are chestnut instead of dark brown, the tuft on the face is shorter, a white chevron is present, and the pasterns are black behind instead of the usual white. This local race ranges west into Angola.

A distinct species of Eland exists in the Congo regions known as Lord Derby's Eland (*Taurotragus derbianus*). It differs from the Eland of the more southern parts of the Continent in possessing large horns, broader ears, which are truncated at the tips, and a dewlap beginning at the chin instead of on the throat, as is the case with the other species.

The Eland is gregarious, and it formerly was often met with in herds of a couple of hundred or more, but owing to constant persecution it is now usually seen in small troops of half-a-dozen to twenty, of which one or two are adult bulls.

Sometimes the young males run together in small troops. In South Africa they frequent the open more or less arid or desert country, such as that of Bechuanaland and the Kalahari; and also the bush-veld and mountainous regions such as the Drakensberg.

When hunted they invariably retreat to the mountains, and when frequently molested they make the mountain ranges their permanent home.

In Rhodesia during the earlier part of the year the Elands take to the rugged forest and coarse grass-clad rugged hills, and finding an abundance

of food they get into excellent condition. At this time they are scattered over the country singly or in small groups of from a couple to five or six.

Usually about June the natives begin burning the grass on the high plateaus, and when the young grass shoots up, the Elands leave the shelter of the bush-covered hills and wander off over the rolling veld to graze on it. At these times they fall an easy prey to the hunter, for they are poor runners, and can be run down easily by a well-mounted man. Occasionally a lean Eland is able to out-distance the average colonial horse.

The old bulls often grow so fat that they can sometimes be actually run down by a man on foot. When disturbed the Elands start off at a rapid trot in single file, and do not break into a gallop until hard pressed. The younger animals take the lead, and the herd bulls the rear. They always run up-wind.

When the grass is young and tender the Elands feed almost entirely on it; but at other times their food consists of the tops of young reeds and the leaves of trees and shrubs, supplemented by wild fruits, bulbs and melons.

Although able to subsist without water for long periods, as is the case in the Kalahari and other waterless districts, the Eland drinks regularly during the night and at daybreak when water is available. They feed principally during the daytime, sheltering themselves in the shade of trees when the sun's

rays grow hot. Although so heavy an animal, the Eland displays wonderful leaping powers, and sometimes when making off they indulge in the pastime of leaping over one another.

After a gestation period of about eight-and-a-half months a single calf is produced.

The period of calving differs considerably in the various districts inhabited by these antelopes.

The Eland breeds freely in captivity and is easily tamed, becoming as docile as an average ox. Major Stevenson-Hamilton mentions having kept some of these animals in a domesticated state. They accompanied the horses, donkeys and cattle when going out to graze in the mornings, and returned with them at night. On the borders of Natal a friend kept several which were allowed to roam at will over the farm. They usually hung around the homestead, and turned up with clock-like regularity for their ration of forage or mealies.

A low grunt is the only sound emitted by the Eland; but the calves bleat like those of domestic cattle when alarmed.

An animal dealer in Port Elizabeth regularly shipped Elands to Europe which he obtained from Rhodesia. Many of them, although captured when nearly adult, became tame and docile and almost affectionate within a couple of months. They wandered about his large enclosure consorting with Zebras, Springbucks, Blesbok and other animals.

It is surprising that more serious and sustained

endeavours have not hitherto been made to domesticate and breed these fine animals for profit.

The Eland, knowing its speed limitations, is very wary and observant. It is usually accompanied by a little feathered friend known as the Rhinoceros Bird (*Buphaga*), which feeds upon the ticks which infest its host. These birds climb up and down and under the body of the Eland with ease and security, holding on with curved claws specially adapted for the purpose. The birds are intensely alert, and on the slightest suspicion of danger they warn their Eland friends by fluttering their wings and screaming, whereupon the Elands make off instantly. After spending hours stalking a troop of Elands, the hunter is frequently baulked by these birds which, detecting his approach, raise an outcry.

The Eland is a timid and harmless animal, and, unlike the majority of other large antelopes, does not put up a fight when wounded and overtaken. The mother Eland will, however, attempt to defend her calf when attacked and overtaken by dogs.

The hide of the Eland makes tough, durable leather.

The bull Eland has a strong tendency to grow bulky and fat, so much so that when chased the overburdened heart collapses and the animal drops dead.

The female is smaller than the male; its neck is not so robust, and it is minus the dark face brush.

It is horned; the horns, although more slender than those of the male, are longer. A peculiarity of the horns of the female is their lack of symmetry. Some have tips turning inwards, others the reverse, one horn is longer or twisted differently to the other, and so on.

On the contrary, those of the male are quite symmetrical as a general rule.

The Eland. This large ox-like antelope is easily tamed and would make a good stock animal.

The Red or Cape Hartebeest.

From paintings by Captain W. Cornwallis Harris, 1840.

THE AFRICAN BUFFALO

(*Bos caffer*)

Qu'araho of Hottentots; Inyati of Zulus, Matabele and Swazis; Nari of Basutos and Bechuanas; Nadi of Barotse and Ngami; Mboa and Nyati of Chilala and Chibisa; Mbogo and Nyati of Swahili; Beva of Hausa; Gădărs of Galla; Gamus of Sudani.

The African Buffalo, or Buffel of the Dutch colonists, formerly inhabited all the wooded and well-watered districts of Africa, from Somaliland in the north to the Cape in the south.

At the present time Buffaloes are preserved in the forest regions of the eastern portions of the Cape Province, and the game reserves of Zululand and the Transvaal. A few still exist in the vicinity of the Sabi River and in Bechuanaland and Rhodesia. From our northern limit they extend northwards through the forest regions to Somaliland.

There are a number of local races or sub-species of Buffaloes. The typical species (*Bos caffer typicus*) occurs in the Eastern Province of the Cape and Zululand. They are plentiful in the Addo bush.

The cattle plague known as the Rinderpest which swept west and south, killed the Buffaloes in great numbers, destroying entire herds, or leaving but two or three per cent. to perpetuate their

species. However, this splendid ox-like animal is in no present danger of extinction in South Africa owing to Government protection, and the time will no doubt come when serious efforts will be made to domesticate it as a food and draught animal.

In various parts of Africa north of the Zambesi, where the white hunter rarely penetrates, the African Buffalo exists at the present time in great herds.

The few individuals which the Rinderpest spared in South Africa have increased considerably in numbers, and in the Cape Province there should be at least a couple of thousand. When unmolested these animals breed as rapidly as domestic cattle.

From the sentimental and æsthetic standpoints, it is highly desirable to make every effort to preserve our native wild animals from extinction, but it is not always desirable from an economic point of view. We know that plagues which affect our domestic animals, and even our own species, may be spread through the mediumship of wild animals. For instance, we know the part the tick and the blood-sucking fly play in the transmission of stock and even human diseases. In order to check the spread of tick-borne diseases we have been obliged to dip our stock at regular intervals in special dipping-tanks to kill the ticks with which they become infested. In addition, we are careful to control the movements of our stock by means of fences and Government regulations. Now, the African Buffalo, for instance,

is a host for ticks which cling to it as readily as they do to domestic cattle. Buffaloes are as highly susceptible to any newly-introduced diseases as are cattle, and this animal may, therefore, easily be a means of propagating and spreading cattle plagues. We know also that wild animals in time become immune to various diseases, and, although the parasites which cause these diseases live and thrive in their blood, they do their hosts no harm; but when carried by ticks or blood-sucking flies to the blood of susceptible domestic cattle, they once again become as virulent as ever. Sleeping sickness and Tsetse fly or Ngana disease are examples.

The Buffaloes associate in herds of numbers varying from a dozen to a couple of hundred. The large herds consist of two or more herd bulls with cows and calves of varying ages. Small troops usually consist of one adult bull with cows and calves.

Old males which have been overcome and driven from the herd by younger rivals, lead a solitary existence, or join in small troops by themselves.

The Buffalo prefers the bush-veld and slopes covered with thorny bush, where there is ample open grassy ground and water within a reasonable distance. It is only when frequently persecuted that they make the thick forest their permanent home.

Like the Eland, the Buffalo is constantly accompanied by the Rhinoceros Bird, which is one of the Starling (*Buphaga*) group, and the Buffalo Weaver

Bird (*Texor niger*). These little birds feed upon the ticks which plague these beasts. They act as sentinels to their hosts, and extremely vigilant ones they are too. The White Egret (*Herodias garzetta*) is another bird which is often seen perched on the backs of Buffaloes, and owing to its long neck it is able to get an excellent view of the neighbourhood, and warns its host of the approach of an enemy.

Buffaloes usually rest in the shade of trees during the daytime, and resort to water in the evening to drink and bathe, after which they feed till about midnight. Then they rest and chew the cud till dawn, when they once again resort to water for a drink before settling down for the day.

They delight to wallow in the muddy pools, and plaster themselves with mud, finding it, no doubt, a protection against blood-sucking flies and other parasites which plague them during the warm season of the year.

On the advent of the breeding season the adult males fight fiercely with each other, and the vanquished bulls are driven forth into exile. The calves are born during the summer months, viz. from September to March. Selous states they are born during January, February and March; and Major Stevenson-Hamilton says that in the Transvaal Game Reserve and near Gondokoro on the Upper Nile he has noticed young calves in September and October.

For a period of ten days after birth, the calf is carefully hidden by the mother in the long rank grass, and she remains in the near neighbourhood and visits her little one at frequent intervals. She then joins the herd with her calf.

In localities where they have not been hunted, Buffaloes are unsuspicious and easy to approach, and, indeed, will often stand and gaze at a man, or even advance in his direction to get a better view should he intrude into their haunts.

When persecuted, however, they become exceedingly wary and suspicious, and make off in the wildest alarm on sight of a man.

Much has been said and written about the fierceness of Buffalo bulls, and the danger of Buffalo hunting. In the game reserves, where these animals are not persecuted, they do not show the slightest disposition to attack a man intruding into their haunts, although they often stand at a distance and gaze curiously at him.

In the Addo Bush, in the district of Uitenhage, there is a fairly large number of Buffaloes. Although they generally disappear instantly into the tangled, thorny bush on sight or scent of a man, yet they have occasionally made unprovoked attacks on men who had entered the bush in quest of Elephants. On one occasion a farmer happened on a herd of fifteen in a large forest glade. The cows made off, but the herd bull with a snort of rage charged headlong at him. He fired, and it fell and began

to bellow, whereupon an old cow dashed furiously from cover up to the dying bull, and with a grunt of rage she, with nose thrust out, charged headlong at the man. He shot her and fled along a forest path, fearful lest the entire herd should charge down upon him.

On another occasion an intruding Elephant poacher came upon three or four Buffaloes in this same bush. They vanished, but, knowing their ways, he advanced cautiously, and caught a glimpse of a bull standing immovable behind a bush adjacent to the patch, waiting for him. Needless to say, he instantly fled in the opposite direction.

Water is scarce in the Addo Bush, and in times of drought there is none at all, and the Buffaloes and Elephants are so maddened that they boldly venture out to the farmer's dams to slake their thirst. At these times the Buffaloes and Elephants are apt to become irritable and vicious, and probably it is only at these times they venture to make unprovoked attacks on men.

A pedigree imported bull belonging to a farmer on the outskirts of the Addo Bush wandered off into it in search of food and was attacked by a bull Buffalo. The two fought a desperate duel. The bellowing attracted some farm herds, and the Buffalo retreated on sight of them. The lordly pedigree bull had been so dreadfully pounded by the Buffalo that it had to be removed in a wagon. It recovered, but its ribs and shoulders had been

so terribly battered that it was but a wreck of its former self.

One day, when creeping through the Addo Bush trying to get a glimpse of the elephants, we saw two old bull Buffaloes in an open space. Focusing a field-glass on them, it was noticed that they were smothered with ticks.

When wounded the Buffalo bull is a most dangerous animal to tackle. It is exceedingly tenacious of life, and when smarting with wounds loses all sense of fear and boldly charges down on its foe, and the unmounted sportsman is then in dire peril, for he must either obtain sanctuary up a tree or kill the charging animal, for, should he seek to dodge it amongst the bushes it will hunt him as industriously as a dog. When once he is overtaken there is no hope for him. Numbers of overventuresome hunters have thus been slain. Sometimes when wounded, a Buffalo bull will instantly charge; and at other times it apparently makes off, but in reality this is but a cunning manœuvre. Dodging behind a clump of bushes or concealing itself amongst them, it watches its foe, and should he be so foolish as to approach, it suddenly dashes out and slays him. Even when a Buffalo falls and lies apparently dead it is not safe to approach without first lodging another bullet or two into it, for it sometimes revives sufficiently to jump up and charge. A wounded Buffalo when dying gives vent to moaning bellows which can be heard a long

distance away, and sometimes impresses the hunter so profoundly that his conscience troubles him for a long time after.

Buffaloes are good runners, and when seeking fresh pastures or to escape from enemies they readily take to water. They swim with only the eyes, nostrils, a part of the horns and a small portion of the hindquarters visible above the surface of the water.

Buffaloes are, as a rule, silent animals, and when feeding or roaming about, the only sound heard is an occasional short, low grunt. However, when attacked by lions, the Buffalo usually bellows like a frightened ox. The calf, too, when seeking its mother, cries after the manner of a domestic calf.

When charging, a Buffalo does not lower its head, but keeps its nose thrust forward and the horns directed backwards. On reaching the object of its attack, it makes a vicious side thrust with its horns and a sudden twist of the head, endeavouring to impale its foe.

The Lion is the only foe the adult Buffalo fears, and even this formidable beast is sometimes driven off and even slain by the bulls.

There are two distinct types of African Buffaloes, viz. the large African or Cape Buffalo (*Bos caffer typicus*) and the dwarf or Congo sub-species or variety (*Bos caffer nanus*). Intermediate between these two there are several local races inhabiting Africa north of the Zambesi.

THE AFRICAN BUFFALO

The African Buffalo stands 5 feet at the shoulder, and is of about the same size and general bulk and shape of an ox. The hair is rather scanty and black in the bulls, and has a brown tinge in the cows. Calves are reddish, and the hair on them grows rather thick. It changes to black at about the age of three years. Very old Buffaloes are hairless.

The Congo or Dwarf variety of African Buffalo stands 4 feet at the shoulder, and in general appearance they resemble a small breed of cattle. The colour of the adult is a warm rufous-red, which changes to a dirty brown on the old bulls. The calves are of a lighter shade of red than the adults.

THE GIRAFFE

(*Giraffa camelcopardalis*)

Syn.: *Giraffa capensis*

Naip of the Hottentots; Tutla of Basuto and Bechuana; Ihuhla of Swazis; Indhlulamiti of Zulus; Ng'habe of Masarwa; Intutla of Matabele; Luomba ningo of Chilala; Intutwa of Chila; Giri or Halgiri of Somali; Nyama marakiti of Asenga; Vakumin deji of Hausa; Zaraff of Sudani.

The Giraffe or Kameel (Camel) of the Dutch colonists formerly inhabited South Africa north of the Orange River to the Zambesi. At the present time it occurs in the northern Kalahari, Khamas Country, the western portion of Rhodesia and Portuguese East Africa to the Zambesi. A number are protected in the Transvaal Game Reserves, and the Warden, Major Stevenson-Hamilton, says they have increased considerably within recent years.

Beyond the Zambesi this species of Giraffe ranges through Africa into the Sudan and Nubia.

The Giraffe varies in its markings throughout its extensive habitat, as is but natural, and it has, in consequence, been divided into several local races otherwise known as sub-species. The typical form or species (*Giraffa camelcopardalis*) inhabits Nubia.

The local races are:

(1) The Kordofan Giraffe (*Giraffa cameleopardalis antiquorum*).
(2) The Baringo Giraffe (*G. C. rothschildi*).
(3) The Taposa Giraffe (*G. C. cottoni*).
(4) The Nigerian Giraffe (*G. C. peralta*).
(5) The Congo Giraffe (*G. C. congœnsis*).
(6) The Kilimanjaro Giraffe (*G. C. tippelskirchi*).
(7) The Angolan Giraffe (*G. C. angolensis*).
(8) The North Transvaal Giraffe (*G. C. wardi*).
(9) The South African Giraffe (*G. C. capensis*).

It will thus be noticed that those which inhabit Africa south of the Zambesi are two local races, the typical species being a resident of the north of Africa only.

Giraffa cameleopardalis capensis is the principal South African race, and the one referred to by most of the travellers, hunters and others in South Africa.

The two South African races, including a third inhabiting Angola, differ from the northern races in the following ways (there are mounted specimens of the two former in the Port Elizabeth Museum):

(1) The legs are spotted to the hoofs.

(2) The body markings are more blotchy, the centre part being darker than at the edges, which are ill-defined.

(3) The third "horn" or long forehead promi-

nence is more or less rudimentary, consisting of a mere lump or bony swelling.

In the northern local races the third horn is well-developed, and stands out 3 to 5 inches from the forehead.

The Giraffe was known from early times, for it is on record that Julius Cæsar exhibited live specimens in Rome. It was first discovered by the Dutch in South Africa in 1761.

The name Giraffe is stated to have arisen from the Arabic Zaref or Zarefat.

These strange-looking animals associate in troops of three or four up to about twenty individuals, composed of a herd bull with cows, immature males and calves. Old males, as is the case with other wild animals, are often observed wandering about alone.

The Giraffe favours rather dry, open country where the Kameel dorn (*Acacia giraffæ*) flourishes; the leaves of this species of acacia tree are its chief food. It is only when this source of food-supply is insufficient that it resorts to the leaves of other species of trees and shrubs. The Giraffe is purely a browser. It usually rests during the heat of the day, and feeds in the early morning and late evening. When standing immovable amongst the shrubs and trees of its habitat, the Giraffe is very difficult to see; and its long neck, even when clearly in view, can easily be mistaken for a dead tree-trunk. When suspicious, it remains perfectly still with head erect

listening intently, and carefully surveying its surroundings. At such times its ears and tail are kept quite still for fear any movement of them might betray its presence.

The Giraffe avoids the dense forests.

Although so awkward-looking, the Giraffe is capable of galloping at a fair speed, giving a well-mounted rider a good run before he succeeds in overtaking it. When they gallop they move the fore- and hind-limbs of the same side at the same time; the tail is switched round and curved over the back; the head and neck swings in a pendulum-like way, and the hind-limbs are straddled. When galloping they remind one of rocking-horses in motion.

Other than man, the only enemy of the adult Giraffe is the Lion, which usually lies in ambush at its drinking-places. A greater number of females than males fall a prey to this beast, for the reason that they resort to water more frequently to drink than do the males. Two or more lions usually combine for an attack. When a single lion springs upon the back of a Giraffe its intended victim at once gallops off, and often succeeds in shaking off its foe before it can succeed in inflicting a fatal injury. The calves are preyed upon by other carnivorous animals, such as the Leopard, Chita and Wild Dog.

The Giraffe has no means of defence other than kicking with its heels. They are mute, but their

senses of sight, smell and hearing are remarkably well-developed.

The old bulls give off a most disagreeable, musky, nauseating odour, which seems to be particularly overpowering and objectionable to horses.

On an occasion a lion and two lionesses attacked an old bull Giraffe when he came down to drink. They succeeded after a rather hard struggle in pulling him down, but almost immediately left him and disappeared into the bush, growling and mumbling, evidently nauseated by the objectionable smell given off by the old fellow. When feeding, the Giraffe neatly picks off the leaves, seed-pods and shoots from the branches, one by one, with its long, flexible tongue.

Although the Giraffe is able to exist for long periods without water, yet when it is available it drinks freely and regularly. This power of existing for long periods without water has been acquired by all the animals which inhabit the dry desert-like districts where constantly flowing watercourses do not exist, and where the rainfall is limited and irregular.

The female Giraffe, after a gestation period of about fourteen months, produces a single calf. The calving time is usually from October to February. On rare occasions twins have been observed. The Giraffe is difficult to stalk owing to its ability to survey its surroundings for a long distance by reason of its long neck and fore-limbs, which gives its head

a considerable elevation. It is usually hunted on horseback.

The hides of these animals are greatly sought after for making sjamboks, and the lashes of wagon whips.

Tick Birds (*Buphaga*) and Buffalo Weaver Birds (*Texor niger*) visit the Giraffe and free it of ticks, rendering their host good service, and also by acting as sentinels.

A fully adult male Giraffe is able to elevate his head to a height of 18½ feet, and a female to about 16 feet.

The Giraffe in captivity is an exceedingly gentle and inoffensive creature.

When drinking or reaching for food upon the ground, it is obliged to straddle its long front limbs wide apart.

THE HIPPOPOTAMUS

(*Hippopotamus amphibius*)

T'gao of Hottentots; Imvubu of Amaxosa, Zulus, Swazis and Matabele; Ikubu of Basutos and Bechuanas; Macow of Masai; Robi of Galla; Tumunto of M'Kua; Kiboko of Swahili; Moubu of Waganda; Jir of Somali; Chivhubwe of Chila; Gumari of Abyssinia; Mourvu of Chilala; Dul of Danakil; Dorina of Hausa; Girinti of Sudanese.

The Hippopotamus or Zeekoe (Sea Cow) of the Dutch colonists formerly inhabited practically all the rivers, lakes and lagoons in South Africa from the Cape to the Zambesi.

With the exception of about thirty, which still exist and continue to increase in the Orange River between the Aughrabies Falls and the sea, they have disappeared from the Cape Province, Natal and Free State, and are now confined to the rivers in the more northern portions of South Africa, where they are still fairly common. They exist, for instance, in the Limpopo, Olifants, Sabi, Crocodile, Komati, Lomati, Usutu and Pongola Rivers. In fact, from the northern corner of Zululand across to the Okovango and Ngami Swamps to the Zambesi, the Hippo still exists in goodly numbers.

In 1918 an old bull Hippo was shot in the Eteza Lake in Zululand. The planters on the Umfolozi

The Hippopotamus or "Sea Cow" formerly inhabited the lagoons and rivers of South Africa in large numbers. Its mission in life is to free the watercourses of rank vegetation which would otherwise choke them.

From Longmans' Wall Pictures: "Wild Animals of the Empire."

had been complaining bitterly of its depredations, and Government gave a permit for the Hippo's destruction. The bull was of unusual size.

From the Zambesi it is to be found in suitable localities northwards through Africa to the Sahara Desert and the Nile.

At the Port Elizabeth Museum we have fragments of bones, tusks and teeth of these animals from the majority of the districts of the eastern portion of this province. Some have been found in river-beds, which have been dry probably for many centuries. They were evidently abundant at one time where the city of Port Elizabeth now stands, for it is a common occurrence to find their remains from a few feet to 40 feet below the surface in the vicinity of, and on the beach.

A small spruit, known as the Baakens River, runs through the city. At some remote time this spruit was probably a fairly large river, with many deep pools in which Hippos lived. The complete skeleton of one, and a portion of another, was excavated within a hundred yards of the beach at the mouth of this river, which was formerly a large lagoon.

When excavating kitchen middins at Port Elizabeth and adjacent districts, it is also a common occurrence to dig out Hippo bones, teeth and tusks; indicating that probably a pre-bushman race, of which we now possess evidence, and possibly the Bushmen and Hottentots hunted and slew these animals.

Mr. T. Liefeldt, who was born in Kaffraria in

the early forties, says: "There were a few Hippos in the lower reaches of the Buffalo so late as '48. The last was, I believe, shot by an officer of the 1850–53 Kafir War. For some few years after this, there were a few in the Keiskama mouth, also old ones in the Kei. In the Umtata mouth there were some six or eight so late as 1866, if not later, and in the Umzimvubu (literal translation of which is 'the home of the Sea Cow'), till later times. I have found their remains so far inland as Cathcart and St. Mark's. I was once told of an interesting Hippo hunt by a centenarian Bushman. It appears the beast was belated in a small rivulet near the upper reaches of the White Kei, while searching for provender, and owing to the limited water-space was unable to hide himself. All the brothers and sisters of the clan congregated round the pool, cut down everything in the shape of thorn-bushes they could manage, and dumped them into the pool, thus eventually forcing the unfortunate leviathan out into the open, where they attacked him with every possible and available weapon, sticking his hide full of everything and anything with a point or an edge to it. Thus men, women and children followed him for several days and nights, replacing the weapons in his carcase as fast as they fell out, eventually bringing him to his knees, and ultimately to his death, many miles from where the scrimmage began. There they encamped and feasted till not a vestige remained."

A family of Hippos were preserved in Sea Cow Lake, near Durban, but owing to complaints by neighbouring farmers of damage done to their crops, and to save the trifling cost of fencing, which was estimated at £700, the then Government allowed them to be destroyed. This was in the year 1898. At the time I protested most strongly through the medium of the public Press, and interviewed public men, but without success. At one time a solitary bull inhabited this lake. He disappeared for nearly three years, and reappeared with a wife and reared a family of three. He evidently made his way to the sea, and thence up the coast to the haunts of his kind at St. Lucia Bay. It is a common practice of these animals to travel along the sea-shore from one river mouth to another; and, no doubt, having first observed them disporting themselves, and lying about the sands at the mouth of the rivers, the early settlers dubbed them Sea Cows. They associate in pairs, and in herds of sometimes thirty and more, and are aquatic in their habits, only venturing away from their watery haunts in search of food.

In localities where they are under Government protection, and in the remote districts where the hunter rarely penetrates, they may be seen during the day lying asleep in shallow water or on the mud and sand-banks. When persecuted they are obliged, in self-defence, to give up this pleasant relaxation and sleep in the deep water, floating with

only the nostrils above the surface; or else they lie at the bottom of a deep pool and rise every five minutes or so to breathe. Such are the artifices animals are driven to adopt by man.

When the approach of night makes it safe to expose themselves, they venture ashore to feed along tracks trodden thoroughly by their nightly excursions. These tracks are known as "Hippo paths," and intersect the reeds and bush in all directions, radiating from the deep pool which happens to be their home. They usually confine their rambles in search of food to within about a mile, but when food is insufficient for their needs within this radius, the Hippos will travel several miles if necessary, returning to their watery home before daybreak. Occasionally a Hippo makes an exceptionally distant excursion, and finding it cannot get home before daybreak, seeks out the nearest pool, and conceals itself in it until darkness again makes it possible for it to travel home in safety. In situations where they are protected, they become quite tame, and may frequently be seen wandering about in search of food during the daytime, or sleeping in the shade in a huddled-up heap. Their food consists of young shoots, herbs, grasses, reeds, etc. They do not eat fruit, or grub for roots or bulbs. Should there be cultivated lands in the neighbourhood of their lair, the Hippos will sooner or later visit them and do immense damage, for, owing to their enormous bulk, they are able to eat great

quantities of vegetable food. Entire fields of corn, rice, sugar-cane, etc., are sometimes eaten off and trodden underfoot in a single night. Sometimes the natives' whole crop of corn is eaten up or spoiled by Hippos, resulting in subsequent famine in the village.

However, any ordinary, upright, fairly solid fence is sufficient to keep back a Hippo; but natives are proverbially indolent and improvident, preferring to do the minimum amount of work and trust to luck.

Many of the rivers in South Africa cease to flow during the dry season; and along their courses there are a good many deep pools in which water is retained all the year round. In the haunts of the Hippo these are known as "Zeekoegats" (Sea Cow holes), which are stated to be deepened and enlarged by the animals themselves. Although so bulky and large, an ordinary barbed wire fence of three strands three or four feet in height will keep back a Hippo; and there is, therefore, little or no excuse for farmers in the neighbourhood of Hippos to clamour for their destruction on the plea that they damage their crops.

Before granting permission for the destruction of any protected wild animal of the country, a thorough inquiry should be made, or a competent authority on the subject be asked to investigate and report.

A Hippo does not give one the impression that it

would be expert in the water owing to its awkward-looking, barrel-like body and stumpy legs devoid of webbed or even large feet. Nevertheless it is an expert and rapid swimmer, and is able to make headway against the strongest currents. A most remarkable thing about the Hippo is that it is able to sink itself in deep water and walk along the bottom, rising to breathe about every five or six minutes. In this way it eludes its enemies, and travels long distances up and down the rivers in safety. This power of walking on the river bottom is due to its specific gravity being almost equal to that of water.

During the rainy season, when rivers are running freely, the Hippos sometimes travel up them to near their sources. Selous records having observed one in Rhodesia at an elevation of about 4000 feet above sea-level. On the approach of the dry season, the Hippos again retire to the lower reaches and mouths of the rivers, or to the permanent water holes or Zeekoegats. When these gats are near to each other, the Hippos sometimes make a communicating ditch or trench in the dry river-bed, along which they travel from one hole to another.

A Hippo can, if hard pressed, remain under water about four and a quarter minutes.

Although so short-legged and ungainly, the Hippo can travel on flat ground as fast as an active man can run.

At the mating season the bulls fight a series of

duels for the right to propagate their species. They attack by biting, and do not attempt to rip, after the manner of pigs.

After a period of gestation, varying from 227 to 242 days, one calf is produced. The young one is carried by the mother on her back when in the water until old enough to look after itself.

When the calves are about to be born, a deep pool is selected, and should there be crocodiles in it, they are unceremoniously driven out, the Hippos knowing full well that they would devour the calves if permitted to remain.

The Hippo is usually an inoffensive and peaceful animal, but when wounded or cornered it will show fight, and with gaping mouth attack men in canoes and boats. Sometimes a boat is accidentally upset by a Hippo when it is rising to the surface to breathe.

When the calf is young, the mother Hippo will often furiously attack any one venturing into her haunts in a boat, she being under the impression, probably, that it is some strange animal enemy.

Hippos which have been frequently shot at become exceedingly shy and timid; and the sight of a man is the signal for instant flight or concealment.

Hippos in protected areas are apt to upset boats in a spirit of frolic, and sometimes with evil intent. In any case it is a serious matter to be thrown into the water, for most of the large African rivers are infested with crocodiles.

The Hippo is usually shot from some place of concealment on the bank. Like most other wild animals, they often lose their lives owing to curiosity, which impels them sometimes to put up their heads to catch a glimpse of a passing boat or a man on the bank; and before the head can be withdrawn, they are often fatally shot through the brain. When shot in the water the Hippo sinks to the bottom at once, but after eight or ten hours the carcase floats owing to the development of gases in its bowels.

The Hippo gives vent to a deep, grunting roar, followed by four or five shorter ones in rapid succession. To those who have never heard the voice of the Hippo, the noise is usually very terrifying, for the impression conveyed is that a troop of lions are close at hand.

A large species of blood-sucking fly often annoys the Hippo when it lies in the shallows, by attacking the vulnerable parts where the skin can be penetrated by its sharp proboscis.

Major Stevenson-Hamilton tells of three lions attacking an old bull Hippo on land. He trudged off with them hanging around and on him, and plunging into the water, at once rid himself of their attentions.

A single snap from a Hippo's great jaws would instantly crush a lion to death. The hide is fibrous and thick, and even a troop of several lions would find a bull Hippo a tough foe to tackle.

Natives succeed in killing Hippos by harpooning them from canoes; a float of light wood or a bladder is attached to the harpoon by means of a long cord. This float betrays the exact position of the animal, and the hunters spear it every time it rises to the surface to breathe, until it receives a mortal wound and sinks to the bottom. The hunters then patiently await the rising of the carcase some hours later, and tow it to the shore or into the shallow water.

Another method is to set a trap consisting of a heavily-weighted spear from a tree branch over a beaten track, along which the Hippo travels at night to feed. However, until the introduction of firearms, Hippos continued to thrive and multiply.

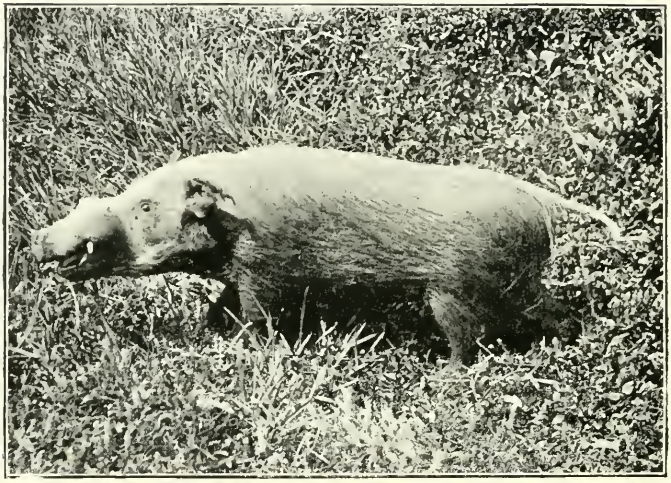
The flesh of the Hippo is excellent, as all writers who have partaken of it testify. Between the muscles and the skin there is a layer of fat which is known as "Zeekoe Speck." This fat must be salted at once to preserve it, as it rapidly decomposes. It is highly prized by both Europeans and natives.

The skin of the Hippo is converted into sjamboks, by cutting off a strip of hide and rounding and softening it. The Hippo whips or sjamboks are in great demand by South African farmers. The teeth furnish a hard ivory, from which dentists formerly made artificial teeth.

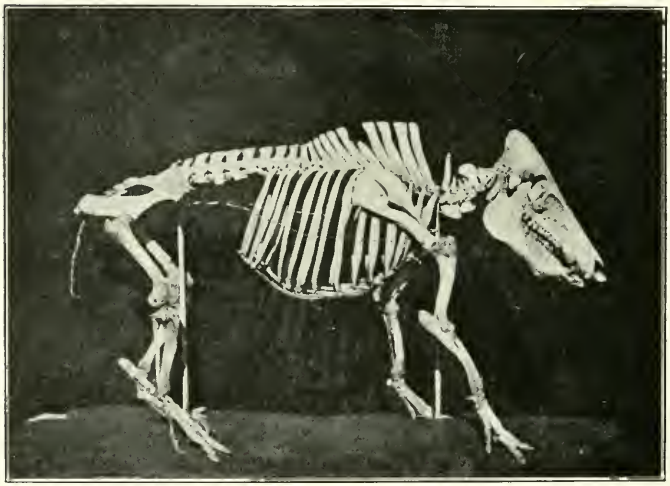
The Hippo is an attractive Zoo animal, and thrives well if properly cared for. It breeds in captivity.

The weight of an adult Hippo bull is at least three tons. The total length 14 feet, and height at the shoulder averages 3 feet 10 inches. The Hippo is useful in the economy of Nature in the wilder districts in keeping down the vegetation which tends to grow too profusely along the banks of rivers; and in clearing the water itself of plants which would otherwise impede its flow and cause the river to overflow its banks and spread over the surrounding country, creating extensive marshes.

A Pigmy Hippopotamus (*Hippopotamus liberiensis*) inhabits Liberia and the adjacent parts of the west coast. It is less than half the size of the typical Hippo, and also differs in other respects.



A boar Bush Pig at bay in the scrub on Mr. Loton Tipper's farm near Port Elizabeth.



Complete skeleton of a Bush Pig or Bosch-vark (*Potamochœrus chœropotamus*).

THE BUSH PIG OR BOSCH VARK

(*Potamochœrus chœropotamus*)

Ingulubi of Zulus, Swazis and Amaxosa.

The Bush Pig inhabits the wooded regions of South Africa, chiefly on the eastern side from the south-eastern part of the Cape Province to the Zambesi, and thence north as far as the Sahara. In British Central Africa the Bush Pigs are redder in hue than the typical species, which is the kind so common in South Africa; and to distinguish them they have been named the Nyassa local race (*Potamochœrus chœropotamus nyasæ*).

Bush Pigs are found most abundantly in broken, hilly, thickly-wooded and watered country. They lie concealed during the daytime in the thickest and densest parts of the bush and in reed beds, and sally forth at night, usually in parties of eight to a dozen individuals, in search of roots, bulbs and fruits which constitute their chief diet. When feeding they turn over the ground after the manner of domestic pigs, only more thoroughly. A small troop of Bush Pigs will turn over half-an-acre of ground in a single night.

When opportunity offers they greedily devour eggs, young birds, reptiles, insects and carrion;

and will even kill and devour antelopes when lying helpless with disease or wounds. Should cultivated fields be within a reasonable distance of their bushy haunts, they will, sooner or later, make nocturnal raids and do immense damage, for they are exceedingly wasteful, damaging far more than they actually eat. Owing to their secretive and nocturnal habits, it is no easy matter to surprise and kill them during these raids. They are particularly fond of Indian corn or mealies when in the " green " or milky condition. I have seen acres of mealies absolutely ruined by these Bush Pigs. After a visit or two by a troop of Bush Pigs, a field of mealies looks as though a regiment of cavalry had ridden through it.

Night after night we have lain concealed in pits or thick scrub watching for them with but indifferent success owing, probably, to their acute sense of smell. Even with the most ingenious of traps we seldom scored a success over these wily pigs.

The Ostrich farmer also suffers at times from nocturnal raids, for these pigs are exceedingly fond of ostrich eggs.

Sometimes during the early mornings and about sundown, and on rainy days, they may be observed feeding in localities where they are not often hunted. Occasionally a large troop of fifteen or twenty are met with. They are common in the dense, thorny bush in the district of Port Elizabeth, from which

they rarely venture, for they have a profound dread of man.

An exceptionally large and ferocious old boar is the leader of a small troop of Bush Pigs at Zwartkops near Port Elizabeth, and, although efforts have been made for several years to hunt him out of his thorny sanctuary, they have failed every time with the sacrifice of many dogs. Dogs which are bold enough to beard him in his retreat, are invariably killed or badly wounded. We have long coveted this old fellow as a Museum exhibit, but there is every likelihood he will die a peaceful death, or be slain by a younger rival.

The young are born about midsummer, viz. during the months of December and January; and a litter usually consists of five or six young ones, although eight and even nine have been observed. Bush Pigs are swift of foot, even on the roughest of ground, and are expert swimmers.

The male Bush Pig is an exceedingly plucky animal, and when surrounded or brought to bay by dogs, he faces his foes and grimly and silently fights until death overtakes him. A boar is immensely strong for his size, and is capable of using his large tusks with the maximum effect. In a combat with an old boar, our casualties were five dogs killed and four wounded, and a Zulu had his thigh ripped open. When pulled down by the pack, with a last expiring effort, he made a terrific side-thrust and disembowelled a dog, slitting it up

as effectually as a man might have done with a knife.

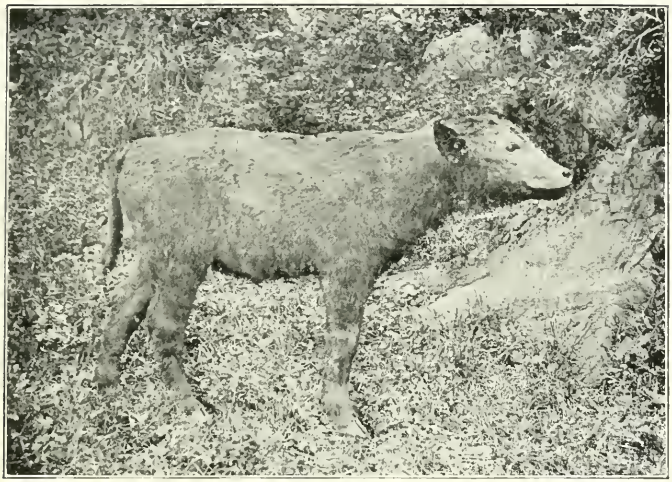
These pigs are very tenacious of life.

The flesh is coarse and lean, but when food is abundant during the rainy season, it considerably improves in quality.

The natives hunt the Bush Pig with a number of dogs. Each native is armed with a stabbing assegai; and should a boar charge, the native leaps nimbly aside and drives the long blade of his spear deep into the animal between the shoulders. It requires considerable skill and expertness to escape the terrific upward sweep of the boar's tusks, and at the same instant deliver a fatal stab. The usual way with Europeans is to get natives with dogs to drive the pigs out of their dense cover, and shoot them when they show themselves in the open spaces. Owing to the tangled, thorny bush and broken ground of their habitat, it is impossible to successfully hunt them on horseback.

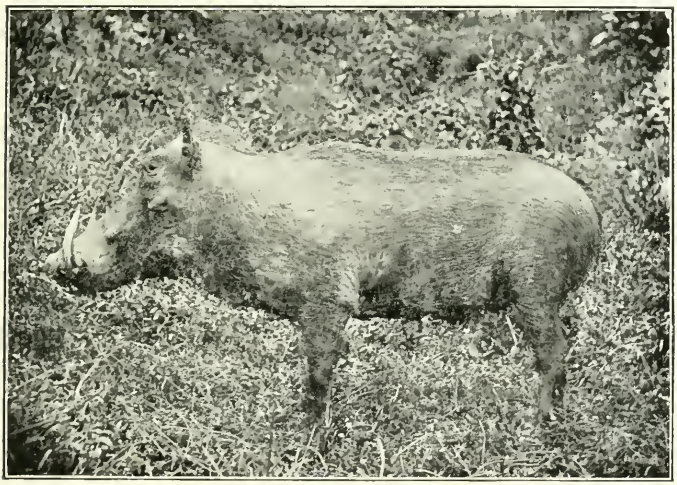
An adult boar stands about $2\frac{1}{4}$ feet at the shoulder, and a sow 2 feet. The weight of a boar averages from 150 to 170 lbs. Occasionally exceptionally large boars are met with. Kirby shot one which weighed 235 lbs., measured 5 feet 3 inches in total length, and stood 2 feet 10 inches at the shoulder.

The body of the Bush Pig is covered with rather long, coarse hair which is fairly thick, and varies in colour from blackish-brown to brownish-red, and



A calf of the Cape Buffalo, from Addo Bush near Port Elizabeth.

[See page 141]



A Wart Hog Boar.

[See page 172]

With a swift rush and a powerful upward stroke he drives one of his great curved tusks deep into his foe.

grey or a mixture of all these colours. Mottled brown and pale grey is a common hue. The face and mane are grizzled, a black spot is usually present below the eye; ears with tufts of long hair at their tips. The adult boars have strong tusks which jut out at the sides when the mouth is closed; and a pair of callosities or horn-like swellings of the skin below the eyes. The young are striped rather handsomely with yellow. North of the Zambesi, in British Central Africa, these pigs are uniform brownish-red and form a distinct local race, viz. the Nyassa race already referred to.

The Bush Pig can easily be distinguished from the Wart Hog of South Africa by (1) its longer and thicker hair, (2) pencilled tufts at the tips of the ears, (3) the smaller size of the tusks. It is a more noisy animal than the Wart Hog, and squeals and grunts after the manner of a domestic pig. Moreover, when running it holds both its head and tail low; the Wart Hog, on the contrary, holds its head and tail erect when running.

In West Africa, beyond the Zambesi, the Bush Pig is replaced by the River Hog (*Potamochœrus porcus*). It is more brightly coloured than its southern cousins.

WART HOG OR VLACKTE-VARK

(*Phacochœrus æthiopicus*)

Kaunaba of Hottentots; Kolobe of Bechuana; Indaigazana of Swazis and Zulus (sometimes Inhlovudawana of the latter, which means "little substitute for the Elephant"); Ikulubi of Basuto; Njiri of natives of Lower Zambesi (Chilala and Chibisa); Ngolobwi of Barotse and Ngami; Ngron of M'Kua; Shaukoli of Chila; Gado and Darunga of Hausa; Hallŭf of Sudani; Karkari of Somali.

The Wart Hog inhabits Africa from Abyssinia and Somaliland in the north to the Orange River in the south. In the early days of the colonisation of South Africa it was met with on the eastern side of the Cape Province, but it is now extinct south of the Orange River. In South Africa it is still found in the wilder parts of Zululand, Portuguese Territory, Transvaal, Rhodesia, Damaraland and Bechuanaland.

The Wart Hog favours lightly-forested, open country, and thick thorn-brakes; but shuns the densely-forested tracts, and is never found far from water.

They usually associate in family parties of two or three sows and their young, or a boar and sow with her last litter. When the young are about half-grown, the boar withdraws his protection, and leads a solitary existence until the next breeding time. The young pigs run with the mother until the next season's litter are about to be born, when

they are chased off and lead an existence independent of her.

Three to four young ones is the average number in a litter.

Kirby mentions having often seen six or eight youngsters accompanying a single sow. He suggests that possibly the surplus may have been adopted, their own mother having fallen a prey to some carnivorous animal, a hunter, or met with a fatal accident.

Although the Wart Hog only possesses four teats, we cannot from this infer that four young ones would necessarily be the limit at a birth. I have known many instances of domestic pigs producing young in excess of the number of teats.

The period of gestation is slightly over four months, and, according to Major Stevenson-Hamilton, the young in the Transvaal are usually born in October.

The little ones are remarkably active, and when but a week old can usually outdistance even a native. It is an interesting sight to see the youngsters bolt away with head up and tail erect.

Wart Hogs conceal themselves during the day-time in the midst of dense patches of tangled scrub, in wooded dongas, or preferably in the deserted holes of Aard-Varks and Porcupines. The Wart Hog when entering such a hole retires into it backwards, so as not to be taken at a disadvantage

in case of attack. These holes are often enlarged to suit the requirements of the animal. The sow, for obvious reasons, prefers such a burrow to dense scrub to bring forth her young.

On the approach of evening the Wart Hogs emerge from their lairs and feed throughout the night and early morning, and sometimes during the daytime in cloudy weather, and in localities where they are unmolested by man. Their food consists of grass, roots, bulbs, wild fruits, berries, shoots and the soft bark of shrubs and branches. They do not turn up the soil so freely as their Bush Pig relatives, nor do they raid cultivated fields except on exceptional occasions, for they have such a wholesome dread of man that when he appears and settles down in their habitat they desert the neighbourhood. This is a wise precaution, for, owing to the open nature of the country they favour, it would be an easy matter for a hunter with dogs to exterminate them.

The Wart Hog when alarmed or pursued make off at a fast trot, seldom breaking into a gallop. The hole of an Aard-Vark is a possession highly valued by a Wart Hog, and many fights take place for them.

When pressed by a hunter and his dogs, or by a pair of Ratels or by Cape Hunting Dogs, the Wart Hog makes for his hole, if he is fortunate enough to possess one, and entering backwards is ready to give battle to any enemy which might be

bold enough to enter. When brought to bay in the open the Wart Hog fights boldly. We cornered an old boar one day in a blind donga. He charged at the dogs, threw two high into the air, and in rushing past a burly native gashed his leg horribly. On another occasion, a Zulu in endeavouring to spear a boar slipped and partly fell, and before he could recover himself the pig ripped open his abdomen. Another was seriously wounded by foolishly approaching a shallow hole in which the pig was hiding. It came out with a rush, and, in passing, seriously wounded the native with a powerful swing of its tusk. The sow will turn and fight bravely in defence of her young. One day a sow and four young ones were startled from cover, and a dog gave chase. Whenever the young pigs lagged behind the sow stopped and dashed at the dog, chasing it some little distance before rejoining her family. When hard pressed, the youngsters endeavour to conceal themselves by crouching in the grass or undergrowth.

Major Stevenson-Hamilton relates an instance of having seen a female Wart Hog charge an adult male Leopard which had attempted to carry off one of her litter. The Leopard fled, closely pursued for about thirty yards, and then sprang into a tree, spitting and snarling, but showing no inclination to descend.

Lions and Leopards prey largely on Wart Hogs, attacking them from the rear to avoid contact

with the formidable tusks which these pigs possess. An old boar in combat is usually a match for a Leopard, and the latter is never over-anxious to attack one.

When running, the Wart Hog, unlike its cousin the Bush Pig, holds its head up and its tail erect. When progressing at a swift trot, the tufted tip of the tail droops over and wobbles about; but when standing on the alert, the tip of the tail is perpendicular or nearly so.

Wart Hogs have keen senses of smell and hearing, but the eyesight is comparatively poor.

Sometimes old boars are observed feeding with Zebras and Antelopes, but they are usually at a little distance from them, and not in the midst of the troop.

The flesh of this animal varies in palatability according to age and the season of the year. When the animal is old or lean from lack of sufficient food, the flesh is rather dry and tasteless; but when food is abundant during the rainy season, the flesh resembles the best pork.

The name Wart Hog is derived from the presence of two pairs of large wart-like excrescences situated on the sides of the face between the tusks and the eyes, and below the eyes.

The body is sparsely covered with coarse bristles, except along the middle of the back, where they are abundant and about a foot in length. The prevailing colour varies from blackish to pale brown.

The height at the shoulder averages 30 inches, and weight about 210 lbs.

The female is smaller than the male, and the warts and tusks are not so prominent. The young animals are usually reddish-brown without stripes or spots.

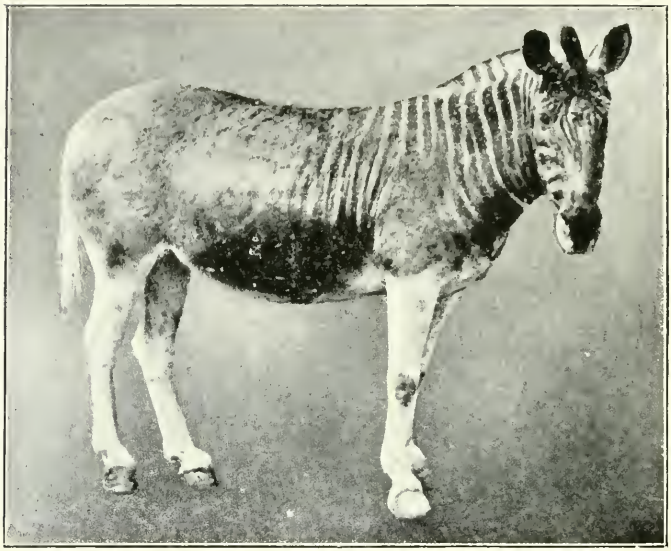
A local race or sub-species (*Phacochœrus æthiopicus africanus*) exists in Abyssinia and Somaliland. It is known to the Somali natives as the Dofar.

THE QUAGGA

(*Equus quagga*)

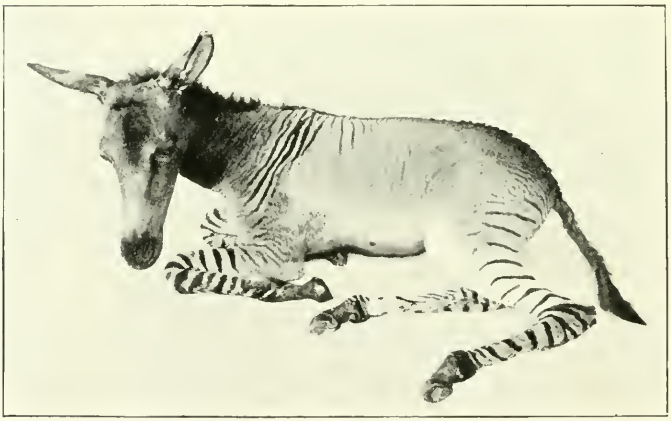
The Quagga is now extinct. It formerly roamed over the plains of the Cape Province and the Orange Free State in large herds. It was a purely South African Zebra, for its range only extended from the central plains of the Cape, and over the vast veld of the Orange Free State. It does not seem to have wandered north of the Vaal River or east of the Kei.

It was hunted and shot down in a most merciless manner by the Voortrekkers, and was finally exterminated in the Cape about the year 1860. The last of which there is any record were shot near Tygerberg in the Aberdeen District in 1858. A few individuals survived until about the year 1878 in the Free State. A live Quagga was exhibited in the London Zoological Gardens. It was presented by Sir George Grey in 1858, and lived for six years, dying in June 1864. It is now mounted and on exhibition at the British Museum. Mounted specimens are also on exhibition in the Edinburgh and Tring Museums in Britain, and in the Paris, Berlin, Frankfort, Mainz, Basle and Berne Museums in Europe. The Cape Town



The extinct Quagga (*Equus quagga*).

The last of its race. It was presented to the Zoological Society of London by Sir George Grey in 1858. It survived for six years, dying in June, 1864.



Foal of a Mountain Zebra (***Equus zebra***) prematurely born May, 1909. Its shews a strong tendency to reversion to a donkey-like ancestral type. The stripes are black, and the body colour a warm brown.

Museum has a young foal, and the Bloemfontein Museum the skin of an adult.

The Quagga associated in herds of fifteen to about thirty individuals, and roamed over the vast inland plains, usually in the company of the wild Ostrich and Black Wildebeeste.

Although in the Orange Free State herds of Burchell's Zebras grazed upon the plains in the early days of the civilisation of South Africa, the Quagga always seemed to keep apart from them. These animals were capable of domestication, and colonists frequently trained them to go in harness. A pair were taken to England, and it was a common sight to see them being driven about Hyde Park in a phæton.

A local animal dealer received a letter from a man in South-West Africa who alleged there were real Quaggas in the hills in his neighbourhood. He asserted in most positive terms that they were genuine Quaggas, and not Burchell's or Mountain Zebras, and gave a minute description of them. I read the letter carefully, and his description undoubtedly related to the true Quagga. He offered to capture some for a price. The animal dealer endeavoured, without success, to obtain a permit from the authorities, authorising him to capture a few "Zebras." He subsequently took a shipload of Zoological specimens to Europe, and it was his intention while there to endeavour to get permission to enter South-West Africa with a permit.

I naturally urged him on all I could, knowing what a sensation the discovery of a few survivors of the once numerous race of Quaggas would cause. The war, however, broke out shortly after, and the investigation was held up.

I am now endeavouring to secure, through two well-known hunters in the South-West Protectorate, a skin and skull of one of these alleged Quaggas with a view to settling the question one way or the other.

The name Quagga comes from the Hottentot name which imitated the cry of the animal. To distinguish it from the Zebra or Wilde Paard (Wild Horse) the Voortrekker Dutch called it Wilde Esel or Wild Ass.

Like the true Zebra, the Quagga resisted capture with both teeth and heels, and early writers mention instances of natives being killed, or pieces bitten out of them by wounded stallions.

The Quagga was the first of South Africa's large fauna to become extinct, for the reason that it was a dweller of the plain, and its range was very limited. The Voortrekkers shot these animals to provide meat for their Hottentot and other native servants, and also for the skins, which made excellent leather for veldschoens (home-made shoes). The skin was also used for making large bags or sacks, in which they stored dried fruits and biltong.

An old Dutchman told me that his father and several uncles made their living solely by shooting Quaggas, Zebras and large antelopes, and selling

their hides. In this way his father accumulated about £5000, which he invested in a large farm and stock.

Thumberg, a European traveller in the Cape, relates that he saw Quagga on the veld near Zwartkops River, and around about the site where Port Elizabeth now stands. The Quagga was of about the same shape and size as a Burchell's Zebra. An adult male averaged 4 feet to 4 feet 6 inches at the shoulder, and measured 8 feet 6 inches in extreme length. The head was light brown or bay colour; neck and upper parts of the body dark rufous-brown, gradually fading to fulvous on the sides, and white beneath and behind. The limbs and tail were pure white.

The Quagga, apart from its general coloration, differs from the true Zebra by being striped on the head, neck and shoulders only. The striping behind the shoulders fades away into spots and irregular blotches.

THE MOUNTAIN ZEBRA

(*Equus zebra*)

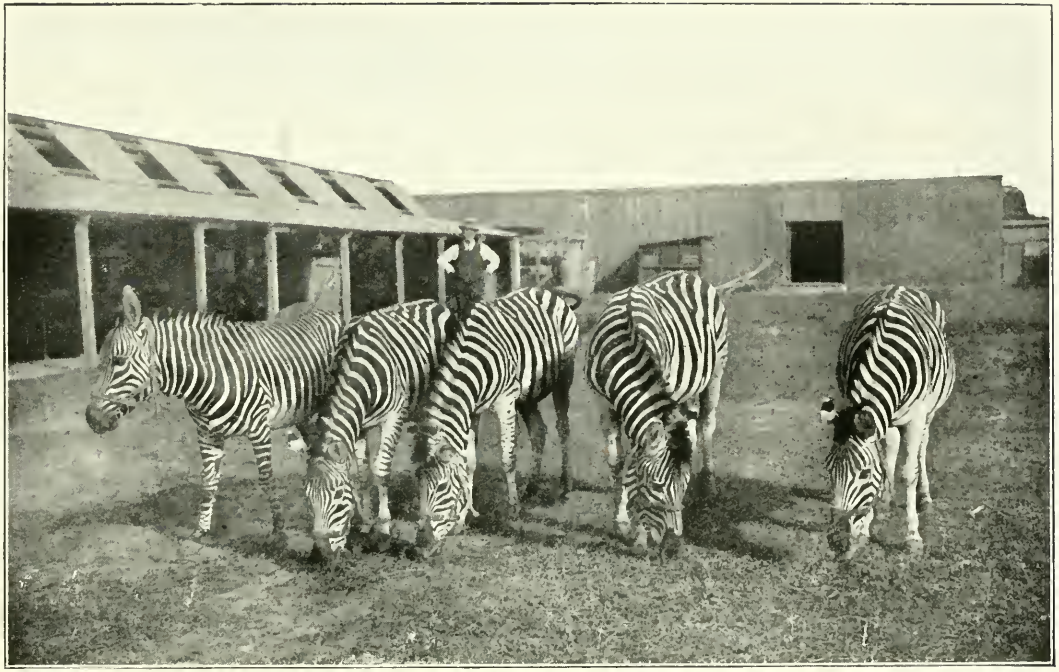
The Mountain Zebra, or Wildepaard of the Boers, is, as its name implies, an inhabitant of the mountain ranges. It was formerly common amongst the mountains of the Cape Province, and in similar situations in South-West Africa. On the advent of the European colonist to South Africa, these Zebras

were quite common in all the hilly districts of the Cape ; but thanks to the wholesale and indiscriminate shooting indulged in by the colonists, this beautiful and harmless animal has been reduced to a few comparatively small troops. These exist amongst the rugged and often almost inaccessible mountains, such as the Cedarberg in Piquetberg, the Roggeveld in Sutherland, the Swartberg between Prince Albert and Oudtshoorn, the mountains in George, the Sneeuwberg in Graaf Reinet, the Winterhoek in Uitenhage, and amongst the mountain ranges of Cathcart and Cradock.

Owing to the recent stringent enforcement of the Government regulations prohibiting the destruction of the Mountain Zebra, this animal has increased considerably in the mountain districts of the Cape. In some mountain ranges where there was formerly only one small troop, there are now several troops. Much public revenue could be obtained if the wild animals of the country were judiciously bred and sold to the various Zoological Gardens throughout the world.

A few Mountain Zebras probably still exist in South-West Africa, but there cannot be many, for the Hottentots of those parts are keen hunters and good shots, and have, ere this, accounted for most, if not all, of these Zebras in the mountain parts of South-West Africa.

For many years past considerable numbers of these Zebras have been captured alive and shipped



A group of tame Zebras at Port Elizabeth. The one on the left is a Mountain Zebra from the Division of George, and the others are sub-species of Burchell's Zebra from the Middelburg Division of Cape Province. These Zebras were so tame that a small boy used to ride them.

to Europe by various animal dealers. One, of my acquaintance, has so far sent about fifteen. When catching them for this purpose a good many are accidentally killed, drop dead from exhaustion, or succumb a week or two after capture. The Mountain Zebra runs in small troops of three or four to about ten individuals, and feeds upon grass and the stunted shrubs which thrive upon the mountain sides.

When feeding or resting, one of the troop occupies an adjacent elevation and acts as a sentinel, giving the alarm with a shrill neigh. In situations where they are not persecuted, such as those on some farms, a sentinel is not posted.

The Mountain Zebra is not one of those animals which has taken to the high rugged mountains owing to constant persecution by man, but apparently, like the Klipspringer, it has made the high mountains its home for preference.

These Zebras feed during the early morning, evening, and at night; resting during the heat of the day under the shade of a tree, in a kloof, or on the shady side of the mountain beneath overhanging rocks. They venture down into the valleys at night to drink, but are always back in their mountain home before dawn. The Mountain Zebra is a short, compact, sturdy little animal, with the toughest and hardest of hoofs.

Although it does not possess the springing powers of the Klipspringer antelope, this Zebra rivals it in

mountain climbing. It gallops about the tops and sides of the rugged and precipitous mountain sides with apparently the same degree of ease as a horse upon the veld.

When alarmed or chased, they will gallop at break-neck speed in a perfect abandonment of recklessness up or down the steep, narrow, boulder-strewn mountain paths. Such truly astounding powers of endurance, surefootedness and sense of balance can only have been evolved after long ages of mountain life. The Mountain Zebra could, with advantage, be domesticated and used as a pack animal for mountain work, such as is often required in military expeditions, for it possesses the climbing powers of the wild goat, and the stamina of a donkey.

A troop of Mountain Zebras consists of mares, foals, and one adult stallion. When the young males reach maturity, they are driven from the troop by the leader until his strength is on the wane, owing to increasing age or accident, when he is in turn driven forth or slain.

When a troop increases beyond half-a-dozen to a dozen individuals, it splits up, some of the mares going off with a young male; for these animals are well aware that the scanty vegetation of their bleak mountain home is insufficient for the maintenance of a large troop.

When endeavouring to capture the Zebras alive, it is a sheer waste of time and energy to endeavour

to run them down on the mountain tops. The way I have seen them caught is as follows:

After locating a troop of Zebras, about a dozen mounted men made a wide detour and formed a semicircle behind them, and with yells, cracking of whips and revolver-shots, the animals were driven on to the slopes, where half-a-dozen well-mounted men were concealed. At the right moment these dashed out in pursuit, while the others guarded the passes up the mountains. The chase taxes the endurance of a good horse to the utmost. The exhausted Zebra is eventually run down, a noose is slipped over its head from the end of a six- or eight-foot stick, and when the quarry falls half strangled, a stout headstall is slipped on the head. It is then led off between two mounted men, each of whom has a rope tied to his saddle, the other end being secured to the headstall on the Zebra. A third man rides behind, and urges the captive on with a whip.

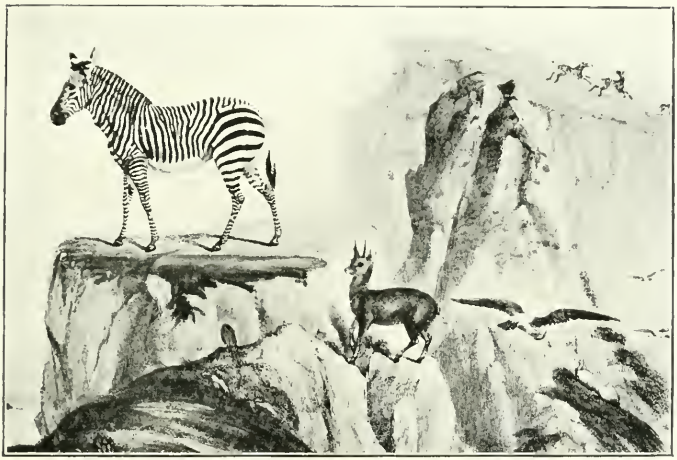
Zebras when hunted in this way often fall dead from exhaustion, or break their necks or legs in their desperate struggle for liberty. A stallion which was captured in the mountains in George District was confined in a small stone kraal, and, at a standing leap, cleared the wall, which was exactly six feet in height, without touching the top.

The Mountain Zebra has the reputation of being an untameable beast, and authors for a long time past have handed down this statement, which is untrue as far as my experience goes. When adult mares

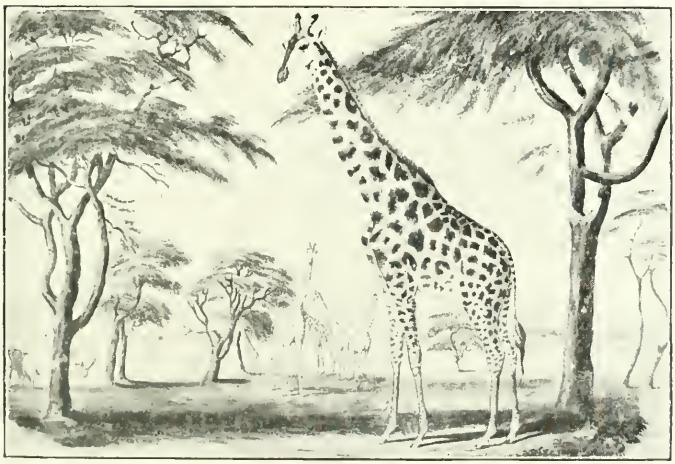
are captured and kindly treated, they become quite tame in a month or two, so much so that when released in an enclosure they graze as unconcernedly as a domestic horse, and can be driven back into the stable without difficulty.

An animal dealer in Port Elizabeth tamed them so thoroughly that they used to follow him about the paddock. One was trained to the saddle, and his little son of ten years rode it.

The immature males were equally docile. Stallions were more difficult to tame, but even they became quite tame within a few months, and after about a year could be trained to the saddle. Old stallions, however, are practically untameable, and for some months after capture they are very vicious, advancing with teeth bared in a most menacing manner. I noticed they always used their teeth for defence or attack, and not their heels, as is usual with the horse tribe. A farmer acquaintance had a fine donkey stallion maimed by a Mountain Zebra stallion. The latter had been leading a solitary existence, and for several days he had been endeavouring to gain the affections of some donkey mares on the hillside. The donkey stallion resented this, and attacked him, but was so badly bitten that he had to be shot to put him out of his misery. On this same farm a solitary old Zebra stallion used to pay nightly visits to the crops, leaping over the barbed-wire fences and stone walls with ease. One moonlight night he was surprised in a field of corn,



The Mountain Zebra. The small antelope is a Klipspringer.



The Giraffe. [See page 150]

From paintings by Captain W. Cornwallis Harris, 1840.

and in his hurry to escape dashed into a wire fence, turned a somersault over it and broke his neck.

Old stallions when captured often refuse to eat, and die of exhaustion, or what is commonly known as a "broken heart." How could it be otherwise with an animal which all its life had been as free as the birds of the air up in the mountain fastnesses, and leader of a troop, to be suddenly captured, tethered and confined in a stable?

The mare Zebras breed freely with donkey stallions, but the hybrids are not fertile. Donkey mares also breed from Zebra stallions.

I once saw a troop of Mountain Zebra mares, donkey mares and hybrid foals led by a Zebra stallion which had been captured young and reared in captivity.

A year or two ago as much as £300 each was obtained for Mountain Zebras from Zoological Garden authorities in Europe by an animal dealer.

The period of gestation of this Zebra is about twelve months. The foal is similar in shape and size to that of an ordinary donkey, and is covered at birth with rather long, woolly fur.

For many months after capture it is necessary to feed and look after the Mountain Zebras with the greatest care, and the diet should consist of hay, dry lucerne and forage principally. A sudden change to green, succulent diet often proves fatal. They suffer considerably from bots, and many in the wild condition die of exhaustion from this cause. Bots

are the larvæ of a species of fly. They attach themselves to the inner walls of the stomach.

The Mountain Zebra stands about forty-eight inches, viz. twelve hands, and is smaller than the other South African species, viz. Burchell's Zebras, and can easily be distinguished from them by the following points:

(1) The hairs along the withers and haunches are reversed.

(2) No forelock is present on the forehead.

(3) Ground colour of body varies from ochre-yellow to pure white. Body fully striped, the stripes not extending round the barrel. Feet striped to the hoofs.

(4) Ears long and ass-like.

(5) A gridiron pattern of transverse bars on the haunches.

A troop of Mountain Zebras exist on the tops of some rugged hills on a certain gentleman's estate in the district of George in the Cape Province. A hunt was organised, and the party, mounted on good horses, succeeded in detaching a mare from the troop. They headed her down to the foot of the mountain and captured her. The following day she was brought in to Port Elizabeth, and within a week gave birth to a premature foal. This was in May 1909. The foal was still-born about a month before the normal time. Instead of being yellowish-white and fully striped, as is usual with the full-time foals of Mountain Zebras, its body colour was light

brown, becoming paler on the limbs and darker on the head. The illustration of this foal shows up the black stripes, which are comparatively few in number. A cross between a donkey stallion and a Zebra mare would produce a hybrid more or less similar to this foal. But it happens this mare did not come in contact with any donkeys. It was one of a troop of wild Zebras living on the crest of a range of high, stony mountains. The troop does not scatter, and any donkey stallion which might have had the courage to venture into the haunts of these Zebras would have been bitten and kicked to death by the Zebra stallion leader of the troop. This is no theory: I know it to be so from observation. Should a donkey stallion appear in sight, the Zebra leader will leave the troop and give chase and kill his would-be rival. In this particular instance, the troop of Zebras lived on the distant mountains, and the nearest donkeys were on a farm many miles away. There can be little if any doubt that this foal is a reversion to a donkey-like ancestral type.

BURCHELL'S ZEBRA

(*Equus burchelli*)

Iqwara of Amaxosa; Idube of Zulus and Swazis; Makwa of Basutos; Peetsee of Bechuanas.

Burchell's Zebra, or Quagga, as it is generally called by colonists, inhabits all parts of South Africa

north of the Orange River from Zululand in the east, across to South-West, and north to our Zoological boundary, the Zambesi. North of this river it extends as far as the Egyptian Sudan.

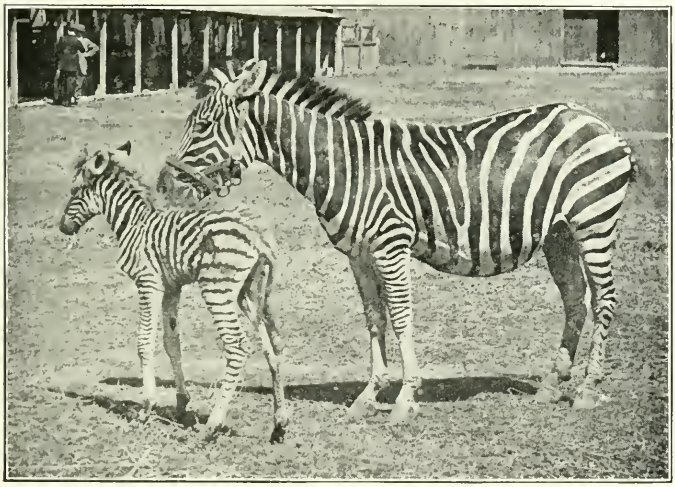
A few specimens were brought from the Transvaal some years ago, and liberated on Mr. Struben's farm "Tafelberg," in the Middelburg Division of the Cape Province. They have since increased to a troop of about thirty. Ten of these were captured and disposed of, leaving a troop of twenty, which are doing well and increasing steadily in number.

Burchell's Zebras formerly existed in immense numbers on the upland plains of South Africa in troops of fifty to a hundred and more. This beautiful animal, as well as the other inhabitants of the Karoo and grass-veld, were subsequently slaughtered in a wholesale way by the early travellers and colonists.

However, owing to Government restrictions, and the establishment of Game Reserves, this Zebra has been saved from the fate of its relative the Quagga.

Burchell's Zebras are very sociable, and when unmolested they congregate in great herds. In East Africa it is a common sight to see a herd of over a thousand Zebras grazing upon the plains, and smaller troops dotted about in the distance, sometimes as far as the eye—aided by a telescope—can see. Dotted about here and there amongst them are various species of antelopes feeding peacefully.

A sub-species of Burchell's Zebra (mare and foal) from the mountains in the Middelburg Division of the Cape Province.



Another mare and foal of the same sub-species of Burchell's Zebra.

In the Game Reserves of Zululand and the Transvaal, these Zebras are increasing at a rapid rate. Now that they are free from persecution by man in these areas, they are gradually resuming their former sociable habits ; and instead of scattering about the country in family parties, they are coming together and forming herds.

When persecuted, Zebras take to the broken, stony, hilly country and bush-veld, and only venture upon the open plains during the hours of darkness. When persistently persecuted, they resort to the boulder-strewn mountain ranges.

They usually drink at night or in the early hours of the morning, but in the Game Reserves, where they are free from molestation, they may often be seen going to water during the daytime.

According to Major Stevenson-Hamilton, the gestation period varies between eleven and thirteen months. The foals are born during the early summer months, viz. from August to the end of October, or early November.

The Lion is the most dreaded of the Zebra's natural enemies. They usually lie in ambush at the drinking places. Knowing this habit of their arch-enemy, the Zebras, in lion-infested districts, approach the water with extreme caution, ready on the instant to wheel about and make off at full speed. In any case, the moment their thirst is quenched, they gallop away to the open ground.

The mare Zebras tend to grow exceedingly fat,

much more so than the stallions. The fat is of a rich yellow colour, which is much relished by the natives, but is unpalatable to most Europeans. Sometimes the fat accumulates to the depth of an inch over the quarters of the animals.

European hunters do not, as a rule, care for the flesh of Burchell's Zebra, except that of the immature animal, which, when freed from the rich yellow fat, is fairly good. It is sweetish in taste, like the flesh of its relative the horse.

In districts where they have not been persecuted by man, Burchell's Zebras exhibit intense curiosity. Travellers tell of herds of them coming up to within one hundred or even fifty yards, even venturing up to their horses and donkeys, and staring and sniffing at them.

The call or cry of this species of Zebra is a sharp kwa-ha-ha, repeated several times. Their speed is not great, and a well-mounted man on open ground can run them down after a fairly hard chase. The Boers, in the past, often captured them alive by riding them down, then, coming up alongside, a noose, held on the end of a long stick, was slipped over the victim's head. When first captured they bite and kick in a most vicious manner, and several men are often required to lead away a single Zebra. When thoroughly subdued and kindly treated, Burchell's Zebra becomes as tame and docile as a horse, and can be trained to harness and to the saddle. I have frequently seen them grazing in the

fields with horses and donkeys, and returning with them to the kraals at sunset. Tame Zebras are often utilised as draught animals for carts, wagons and carriages. After a few generations of domestication, there is no reason why these Zebras should not become as reliable as average horses and donkeys.

When taken into captivity and trained to harness, the Zebra naturally cannot compete in endurance with the horse or donkey, whose ancestors for thousands of generations have been building up and transmitting "staying" power along these lines. The Zebra is immune from that dreaded scourge known as "horse sickness," and to Nagana or Tsetse fly disease as well.

Zebras are often infested with intestinal worms, and when restricted to limited areas such as farms, an entire herd often becomes so badly infested by these worms that the majority die.

There is every probability that sometime in the future, Zebras will become a common domestic animal in South Africa, especially in horse sickness and nagana disease areas.

A serum could probably be obtained from them for the treatment of these diseases.

A local animal dealer procured several Burchell's Zebras from a farm in the Middleburg Division of the Cape Province. Two of these gave birth to foals in October. These foals were prematurely born, apparently two to three weeks before the normal time. They were beautifully striped, and exactly similar in

their markings to the mothers; the hair was close and smooth, and the edges of the black stripes were clearly defined. Three weeks later, another mare gave birth to a normal period foal. The little creature was decidedly longer in the limbs than the immature ones, and the body was covered with yellowish woolly fur, at least an inch in length. The stripes were present, as in the adult, but were not clear cut or sharply defined, owing to the fuzziness of the long, woolly hairs. This foal was born during the first week in November.

These Tafelberg Zebras agree in every detail with Mr. W. L. Sclater's description of the subspecies *Equus burchelli selousi* (Selous Zebra) with the exception that a narrow white line about a quarter of an inch in breadth separates the hoofs from the black band round the lower part of the fetlock.

Owing to dissimilarities in the striping, Burchell's Zebras have, so far, been divided into six local races in South Africa, viz.:

(1) Burchell's Zebra (*Equus burchelli typicus*).

(2) The Damaraland Zebra (*Equus burchelli antiquorum*).

(3) The Transvaal Zebra (*Equus burchelli transvaalensis*).

(4) Wahlberg's Zebra (*Equus burchelli wahlbergi*).

(5) Chapman's Zebra (*Equus burchelli chapmani*).

(6) Selous Zebra (*Equus birchelli selousi*).

(7) Crawshay's Zebra (*Equus burchelli crawshayi*).

The typical species is either extinct or almost so.

These local races merge almost imperceptibly one into the other, making the separation of them into distinct sub-species a matter of considerable difficulty.

The following are the chief points of difference on which Burchell's Zebras have been divided into various sub-species. This key of the sub-species is taken from *The Fauna of South Africa*, by W. L. Sclater.

KEY TO THE SUB-SPECIES

A. Barrel stripes not reaching the ventral longitudinal stripe.
  (*a*) Legs white and unstriped from their junction with body. *Equus burchelli burchelli.*
  (*b*) Legs slightly striped as far as the knees and hocks. *Equus burchelli antiquorum.*

B. Barrel stripes meeting the ventral longitudinal stripe.
  (*a*) Shadow stripes extending to neck, where they are very plain, lower portion of legs but slightly marked. *Equus burchelli transvaalensis.*
  (*b*) Shadow stripes only on quarters, very strong and distinct, fetlocks and pasterns unstriped and unspotted. *Equus burchelli wahlbergi.*
  (*c*) Shadow stripes on quarters faint and narrow.
    (i) Stripes on the lower part of the leg showing a tendency to become obliterated, pasterns not continuously black. *Equus burchelli chapmani.*
    (ii) Legs strongly striped to the hoofs; fetlocks and pasterns continuously black. *Equus burchelli selousi.*
  (*d*) No shadow stripes. *Equus burchelli crawshayi.*

Burchell's Zebras vary considerably in their markings in the same herd, and in consequence it will, I think, be found, on further and more extensive investigation, that the majority, if not all, of

the so-called sub-species or local races are merely individual variations.

It seems to me there are only two good local races, viz. those with the black barrel stripes not reaching the ventral longitudinal stripe; and those in which all the black barrel stripes meet the ventral longitudinal stripe, viz. those with the barrel stripes right round the body, and cut through by the ventral longitudinal stripe. The others seem to be mere variations from these two types.

The Reverend Gilmore Edwardes, of Port Elizabeth, contributes the following interesting account of a Zebra hunt in the Cradock District of the Cape Province:

"Zebras in South Africa are royal game, and may not be killed or caught without a permit. This document is one not easy to procure, and always limits the sportsman strictly to a specified number in each case. Mr. John de Klerk, whose farm, Doornhoek, lies among the mountains some fifteen miles to the west of Cradock (Cape Province), had the good fortune recently to obtain such a permit, authorising him to catch six Zebras (two of which were to form part of South Africa's present of wild animals to His Majesty King George), and forthwith invited a number of friends from the farms in the district, and from the neighbouring town of Cradock, to join in what proved to be an exciting day's sport.

"Assembling at the homestead early in the

morning, when the plan of campaign was explained and discussed, the party, mounted on sturdy and well-trained shooting ponies, climbed the steep and rocky track which leads from behind the house up the face of a mountain spur, and reaching the summit, rode on across the main ridge and down the slope on the other side, into the broad and open valley beyond, where lay the carefully-planned centre of operations, the scheme of which will now be described.

"Across the valley, and over the mountains in either direction, runs the boundary fence of the farm, miles of wire, which even the wild Zebra will seldom attempt to negotiate. From a suitable point in this boundary fence, a wing of wire fencing had been run out to a distance of 200 yards, at an angle of about 50°, while at the apex an opening was left leading into a strongly-constructed wire kraal, a cul-de-sac. This was the pivot of the rounding-up movement, the object being, of course, to work the Zebras into the space between the fences, and to drive them down into the kraal. Four horsemen were extended in line with the wing fence to guard against a rush past its outer end, while a dozen or more rode behind the hills to the left, sending some of their number round the head of the valley to the hills on the other side; thus, with the wire fencing, completely encircling the area where it was expected that the game would be found. One small troop had already been sighted, but as the arrangements

were not complete, these quietly moved off, and disappeared after the elusive manner of their kind. Everything, however, was now in order. The men were at their stations; the horses fit and keen; the fences firm and strong; the kraal open-mouthed and ready for all comers, while, lying behind a rough shelter of bush, were two or three natives, ready to spring forward to bar the entrance the moment the Zebras were in. The horsemen began to move down the hills, closing round the valley, and there below them, quietly grazing on the slope of a gentle rise, was a troop of eight of the beautiful creatures they were seeking. Recognition was mutual and instantaneous, but the sentiment of the Zebras just now was evidently that of Dr. Johnson when he found himself in the company of uncongenial characters: 'Gentlemen, I do desire that we be better strangers,' for, with a shake of their heads, and an indignant snort from their leader, the troop trotted off. They soon recognised that the hills were already occupied, and breaking into a canter, they made down the slopes for the open valley. The horsemen rode warily; they wanted no stampede. As long as the troop were going in the right direction all was well. And now they are in the open ground. Away to the left is the main fence; in a semi-circle behind are the pursuers; away to the right is the line of horsemen guarding the wing. So straight on the Zebras canter. Now they are between the fences; but they have not yet realised

it, and the horsemen are closing rapidly round behind them. The excitement is becoming intense; the horses plunge forward recklessly over the boulder-strewn ground; the Zebras are galloping straight for the kraal. In thirty seconds they will be in; but no! The leader has scented danger. In the middle of his stride he swerves. The whole troop swings 'right wheel' into line, and charges straight for the wing fence. What are they going to do? Will they attempt to clear it? Will they dash into it and attempt to burst it? They are not such fools as to try either of these plans. Three of their number forge ahead of the rest, and, with heads low down, fling themselves forward, driving their heads under the lowest wire almost up to their withers, and, with a mighty heave, up comes the fence, the nearest post flying clean out of the ground. Through go the three; behind them falls the fence; over it bound the rest of the troop, and away —but not all. One catches his hoof in a wire, and turns a beautiful somersault in black and white. He is up in an instant, joins his comrades, and off they go. See them going, going, gone! They have vanished in thin air over the opposite hills. And there, on the backs of nigh upon a score of panting and puzzled horses, sit nigh upon a score of gallant horsemen ruminating on the bitterness of life, the fickleness of wire fencing, and the incredible fussiness of mountain Zebras, and making sundry remarks peculiarly appropriate to the occasion.

"A council of war was now held, as a result of which the fence was repaired, and a second rounding-up movement arranged. The formation was much as before, and the horsemen swept round the hills, centreing, as in the previous drive on the valley which led to the kraal. Fortune was again favourable, but not extravagantly so, for this time the find was one of only three Zebras and a foal. Taking of necessity the same direction in the main as the larger troop had taken, they showed some independence of judgment in keeping more to the hilly ground, hoping perhaps to break through to the right. In this, however, they were thwarted by the vigilance of the enemy, who gradually forced them into the true course. This meant a run down a steep and rugged mountain side, and afforded a fine opportunity of witnessing the amazing speed with which these wild mountaineers can dash down-hill, treating rocks, boulders and holes with a reckless contempt, rivalling even that of the fleet-footed Rooi-buck. Down they go into the open veld, straight for the fenced area. Like their predecessors, they feel their pursuers closing in behind them, and forge ahead towards the kraal. But again nature's cunning hand is shown. Some subtle instinct warns of danger in front, and they come galloping back over their tracks towards their pursuers, bearing a little to the left, with the evident intention of getting round the outer end of the wing fence.

"Now comes a trial of skill and speed with the wing men. Will they get through or not? It is a wild dash for freedom. They stop at nothing, and in spite of all efforts on the part of the horsemen, two of the Zebras and the foal get over the line, and are out along the hillside towards the distant mountains. Two only, for the third was, after much helter-skelter, stopped and headed back. The hunt was now cut in two. The wing men rode off in pursuit of the three animals which had got away. Meanwhile, within the fenced area (which, it must be remembered, was open to the veld at its broad end, and to the kraal at its apex) the sport waxed fast and furious. Up and down, round and round, sped the desperate Zebra, stopped by the wire fence on two sides of the triangle, and by horsemen on the third. To the men with the lasso it gave no chance; to the kraal it would have nothing to say. Close behind it rode Mr. John du Plessis, mounted on a horse as untiring as it was sure-footed. It was a wild race between horse and Zebra, and the end came in an extraordinary way. Mr. du Plessis (riding 15 st., by the way) was galloping close at the heels of the Zebra, when the latter suddenly swung round on its hind-legs and faced its pursuer. Without checking his horse in its pace, this veritable Nimrod flung himself out of the saddle right in front of the Zebra, seized hold of the astounded creature by its enormous ears, and by sheer force of weight and muscle, held down its

head till his comrades came to his aid. The clapping on of headstall and ropes was but the work of moments in their practised hands, and, with much plunging, prancing and kicking the beautiful captive was lodged within the kraal.

"While the plans and procedure throughout had been scientifically laid, and correctly carried out, the ultimate capture was as ludicrously unorthodox in method as it was plucky and effective in execution. Catching wild Zebras by laying hold of their ears sounds next-of-kin to catching birds by putting salt on their tails. However, nothing succeeds like success, and the Zebra, a four-year-old mare, was now making things lively in the kraal. In the meantime the horsemen who had gone in pursuit of the others were having a hard run for it. The ground was so covered with great round stones and young boulders, that there seemed nowhere for a horse to put his foot down. Still, for all that, they got away at a tremendous pace. The foal was a serious check on the other Zebras, and from time to time the faithful creatures would pause to let the little one come up with them. Along the side of the hill they went, and down the slope of a shallow kloof, where trickled a tiny spruit. Here the foal made a false turn, and a rider, dashing forward, cut it off and headed it up the hill and away from the others. Its capture was now only a question of time. Mr. Simon de Klerk was foremost in the run, and at last rode it down, exhausted on the hillside. The

two Zebras, which had stood on the opposite hill watching their little friend's fate, now disappeared. With some difficulty the foal was brought up to the kraal, where, to everybody's delight, it was found that the two captives were mother and foal, reunited in bondage, it is true, still, reunited. So ended the second drive. Many of the horses were done up with several hours hard riding under a blazing sun, and were glad of a rest. In groups of twos and threes they stood with their bridles trailing on the ground, never attempting to move away—such is their hunting training—but making the most of their opportunity with what they could pick up in the way of green food growing amongst the stones, while their riders beguiled the time with a smoke, and with watching proceedings within the kraal. As the sun was now going west, it was decided to combine the homeward trek with a third enveloping movement, which should sweep the mountains, as yet untouched, in the direction of Doornhoek, the direction, that is, in which the escaped Zebras had gone. Again the horsemen, after a drink of warmish water from the spruit, in which the horses joined them, split up into parties, and rode off in various directions, the advance party going a roundabout way in order to drive up again from beyond the homestead.

"There was, of course, no further idea of using the kraal as a trap. This was left in the rear of the present movement. The general idea now was to

find and drive a Zebra, and to capture either with the lasso, or by cornering. In company with two others, one being the hero of the first capture, I had ridden to the top of the area now being worked, and commanding a complete view of the area, as well as of the glorious panorama of the mountainous country around. Presently, away down on a lower range, could be seen a small greyish object moving in our direction, and 200 yards beyond it four black dots in line. The one was a Zebra, the four dots were the hunters. On they came, till the Zebra approached the foot of the hill. Skirting this, he turned to the left, only to discover in the distance other horsemen threatening his advance. Doubling back round the foot of the hill again, and cleverly dodging his original pursuers, he made an attempt to get round the back of the hill, only to be met with another line of obstructers. Quick of decision, he now dashed up the face of the mountain, between this last party of horsemen and ourselves, determined to make a bid for freedom in the direction of the morning's field of operations. By the time he reached the comparative level at the top of the hill he found himself running a close race with one of his persistent enemies, Mr. John du Plessis, of Garstlands Kloof. The situation was now desperate. In front was a wire fence, the two upper wires of which were barbed. The opening through which he and his comrades had come earlier in the day was far down to the right, and probably in the

hands of the enemy. Close at his heels rode the hunter. On they sped, straight for the fence. Ten feet from it the Zebra paused. 'What was to be done?' It was only a second, that pause; but the horseman was beside him, out of the saddle, and on to his head, with two brawny hands gripping him by the ears. With a wild and uncontrollable bound, the Zebra hurled himself and his assailant into the wire fence, where, kicking and struggling, shouting and snorting, the two spent a really magnificent five minutes—well worth remembering. The hunter had the Zebra by the ears, and would not let go. The wire fencing had the hunter and Zebra by the arms, legs and necks, and would not let go, and the barbs were doing a brisk business with both of them. How long this would have gone on it is impossible to say, had not the redoubtable captor of the first Zebra come to his relief. Jumping off his horse, and taking in the situation at a glance, he seized two stones, and with two or three sharp blows, he cut the wires, bundled man and Zebra through the opening thus made, threw his own enormous weight into the mêlée, and there was the Zebra on the ground, with one man on his head, and another on his haunches. Meanwhile, other horsemen were rolling up in hot haste. Headstall and ropes were soon fixed on the captive Zebra—a fine young stallion of about two years. His captors moved off to the ends of the ropes. He leapt to his feet, and thereafter kept everybody

connected with him at leg's length, and fairly busy.

"This was the end of the third drive, and concluded the day's sport. The task of getting the captives down the mountain track to the farm was slow and difficult, but at last it was successfully achieved; and when the hunting party broke up at the homestead, after being hospitably refreshed by our host and hostess, the three Zebras were safely stabled and doing well."

THE WHITE OR SQUARE-LIPPED RHINOCEROS

(*Rhinoceros simus*)

Burchell's Rhinoceros; Umkombe of Zulus; Umhofo of Matabele; Chukuru of Bechuanas; Um Girin of Sudani.

The White Rhinoceros, or Witte Rhenoster of the Dutch hunters, was formerly common in the open grassy country in South Africa, between the Orange and Zambesi Rivers. It has never been recorded south of the Orange River. At the present time the only living specimens in South Africa number about twenty, which are strictly preserved in the Game Reserves of Zululand. It is possible one or two may still exist in the remoter parts of Southern Rhodesia. It was formerly believed that the Zambesi was the northern limit of the White Rhinoceros, but it is now known to be common in north-eastern Congo, the southern portions of the Sudan, west of the Nile, and some other parts of Equatorial Africa.

The northern race differs from the southern form in the proportions of the skull, and apparently the skin is somewhat different. It is known as *Rhinoceros simus cottoni*.

How the name of White Rhinoceros came to be

applied to this animal is uncertain, for it is of a dark, slaty-grey colour, and certainly could not by any stretch of the imagination be called white.

Selous says that when standing in the open, with the sun shining fully upon them on a winter morning, they look white at a distance. Possibly seeing them thus, out upon the grassy veld, the Boer hunters bestowed the name of Witte Rhenoster on them—a name which is certainly inappropriate. Personally, I believe the name has arisen from the habit of the animal wallowing in whitish clay, which is so common on the bottoms of pools and water-holes. On emerging from its muddy-water bath the sun and air rapidly dries the film of clay on its hide, which at a distance shows up greyish-white.

Square-lipped Rhinoceros is a suitable name, for the upper lip of this great beast is square, and not of a proboscis-like nature as in the other species.

Before the advent of the European colonists to South Africa, the White Rhinoceros was quite common beyond the Orange River, and the writings of the early travellers and hunters teem with accounts of the slaughter of considerable numbers of these animals.

During the course of a day's trek with a wagon, it was a common occurrence to see from fifty to a hundred of them.

Between 1840 and 1850 these prehistoric-looking beasts were still abundant in suitable localities in the Limpopo and Lake Ngami regions.

In former days, judging by their writings, the majority of European hunters slaughtered game animals for the sheer lust of killing. For instance, two hunters whose names are often quoted in natural history books, mention having, during one short hunting trip, killed ninety Rhinoceroses, the majority of which were of the square-lipped species. Another hunter killed sixty in a single season. Even in the remote districts where the European hunter had not penetrated, the slaughter was carried on by natives who had obtained possession of firearms.

The last living specimen in South Africa, other than those preserved in Zululand, was one which was shot in Rhodesia in the year 1895.

The White Rhinoceros is an inhabitant of the open grassy plains and wide valleys, and feeds chiefly, if not entirely, on grass. They associate in pairs or family parties; at other times they are solitary.

Although not associating in troops, they must have been quite numerous in restricted localities, for, during a day's march, it was seemingly a common occurrence to observe from twenty to fifty of these huge beasts. A day's journey in those times with a wagon and team of bullocks over the roadless veld was a very slow method of travelling, and if a score or more Rhinoceroses were encountered in a day's journey, they must have been very numerous. Harris mentions having seen as many as eighty in a single day.

These animals feed during the night, or in the

mornings and evenings. During the heat of the day they retire to rest, and sleep under the shade of some solitary tree on the veld, or in a patch of bush. They appear to sleep very soundly, and their sense of hearing and sight are dull.

It is often possible to steal quietly up and take a photograph at close quarters as they lie like giant pigs soundly sleeping.

The Rhinoceros is usually accompanied by the Rhinoceros Bird (*Buphaga*). These birds feed upon the ticks which infest the skins of their hosts. They also render good service in warning their Rhinoceros friends of the presence of danger by their shrill cries. This animal progresses at a rapid trot, with the head carried low, and the long horn almost parallel with the ground. Although it can, at a trot, outdistance any man on foot, it is easily overtaken on horseback, hence the reason it falls so easy a prey to the hunters. When a mother Rhino is accompanied by a young calf, it always runs in front of her, and is guided in its course by the tip of her horn, which is gently pressed on the rump as occasion demands. In this way she is able to keep it in full view, and guard it at the same time from attack, at least by the larger carnivorous animals, such as the Lion.

The White Rhinoceros, when feeding, progresses along at a steady walk, cropping the grass as it goes. It drinks during the evening or at night, and is never found at any great distance from water.

It has a rather remarkable habit of always depositing its excrement at the same spot, and this in time forms great accumulations. When the mass assumes an inconvenient height, the animal scatters the dry mound with its horn.

The White Rhinoceros is timid and inoffensive, although when wounded and brought to bay it will occasionally charge. An instance is on record of a hunter having his horse transfixed under him by an enraged Rhino of this species.

It seems a great pity that so harmless and inoffensive an animal should have been allowed to be almost exterminated in South Africa, especially so as it is one of our most interesting fauna.

The White Rhinoceroses were usually hunted down and killed for the sake of their horns and hides. The latter were cut up and converted into sjamboks and wagon whigs, and the former were sold as curios or converted into walking sticks, whip and knife handles, combs, etc.

Selous mentions that the eyesight of Rhinoceroses is so poor that on many occasions he was able to walk up to within thirty or forty yards of them on the open veld, without apparently attracting their attention.

Their sense of smell is highly acute, but that of hearing seems to be rather indifferent.

When hard pressed this animal, whose usual pace is a swift trot, breaks into a lumbering gallop. If a hind-leg is broken, it is unable to run, but with a

broken shoulder it can progress for a considerable distance at a gallop.

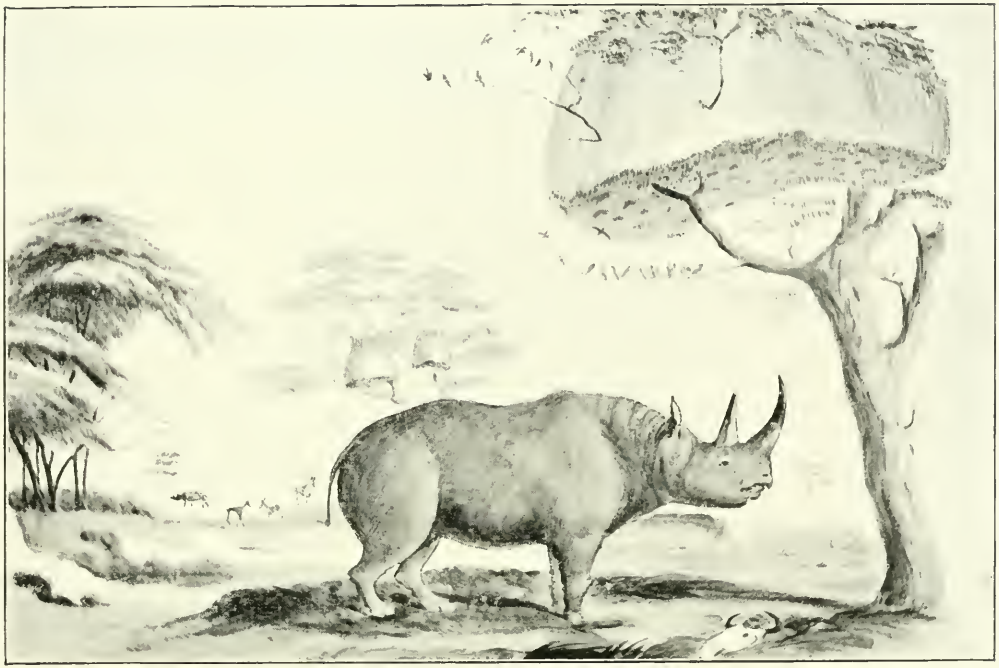
The flesh was greatly sought after by the trek Boers for food, as it was considered to be much superior to the flesh of any of the antelopes. The hump was the favourite part. This was cut off with the skin attached, and roasted in a hole in the ground.

Towards the end of the rainy season these Rhinoceroses usually become so fat that a layer of it, an inch thick, is often found under the skin of the upper parts, and a couple of inches in depth all over the abdomen.

One young is produced at a birth. Should the mother be shot, the calf, if very young, refuses to leave her body, and stubbornly resists all efforts to drive it away. The little orphan boldly charges if either man or dog attempts to approach the body of its mother.

The White Rhinoceros breeds very slowly. Selous and others have often observed a bull and cow with a young calf, and another of quite a large size, the latter no doubt being the former calf.

It is, with the exception of the Elephant, the largest of all land animals. An adult bull stands from 6 feet to 6 feet 9 inches at the shoulder, and measures nearly 14 feet from the nose to the root of the tail. It is hairless, with the exception of a fringe along the edges of the ears, and bristles at the end of the tail. The skin is dark slaty-grey;



The Black Rhinoceros or Zwart Rhenoster.

The structures in the trees are great masses of grass built among the branches by colonies of Social Weaver birds. The underparts are honeycombed with cavities in which the birds rear their families.

From a painting by Captain W. Cornwallis Harris, 1840.

head, long and heavy; upper lip square; ears more pointed and of greater length than in the prehensile-lipped species.

Head with two horns. The front or nose horn is usually more slender, longer, and less acutely curved than in the other species of Rhinoceros. Sometimes the front horn is straight, or even inclined forwards. This anterior horn grows to a length of about 4 feet 6 inches. The longest on record is 56½ inches.

The leading differences between the two species are:

(1) *Rhinoceros simus*—larger. Straight upper lip.

(2) *Rhinoceros bicornis*—smaller. Prehensile lip.

The former grazes; the latter browses.

THE BLACK OR PREHENSILE-LIPPED RHINOCEROS

(*Rhinoceros bicornis*)

Upejani of Zulus and Matabele; Sipejana of Swazis and Matonga; Upelepi of Basutos; Borele and Keitloa of Bechuanas; Chipémberi of Lower Zambesi natives; Muin of Masai; Wărtses of Galla; Shempola of Chila; Fava of Swahili; Gurhu of Danakil; Megi of M'Kua; Wil of Somali; Abu Gesn-Khartyl of Sudani.

The Black Rhinoceros, or Zwart Rhenoster of the Dutch hunters, formerly inhabited Africa from the Cape to Abyssinia and Somaliland.

By retreating to the cover of the dense, thorny

forests this Rhinoceros has, so far, escaped extinction at the hands of hunters. A few exist in the Zululand Game Reserves, and have of late years been steadily increasing in numbers. Isolated specimens still lurk in the dense, thorny bush in the north-eastern part of the Transvaal and Southern Rhodesia; and a fairly large number are known to inhabit the forests in the southern part of Portuguese East Africa.

These surviving specimens are now strictly preserved, and no doubt those from the different districts will interbreed when possible, and prevent the extinction of this animal in South Africa through inbreeding, as will probably happen with the few remaining survivors of the "White" species in Zululand.

The last Black Rhinoceros shot in the Cape Province, according to Hall, was an old bull, in the year 1853 on the Coega River, not far from Port Elizabeth. In the Orange Free State the last one recorded was shot in 1842 at Rhenoster Kop on the south side of the Vaal River in the Kroonstad District.

The Black Rhinoceros inhabits the bush-veld and scrub-covered rocky country, although in certain districts it is frequently seen feeding away out on the grass-covered, but treeless plains, upon a small plant of which it is very fond.

It feeds upon leaves, shoots, green twigs, shrubs, small plants and roots, but not grass.

Its long, prehensile upper lip is admirably adapted for browsing, as the square lip of the other species is for grazing. It is a rather interesting fact that the White Rhinoceros should subsist entirely on grass, and the Black species on leaves of trees and shrubs.

Although met with in pairs or family parties, the Black Rhinoceros is generally solitary. It is somewhat more alert and suspicious than the other species, and is usually accompanied by Rhinoceros Birds.

The Black Rhinoceros rests during the heat of the day in the shade of a convenient tree, in a thorny thicket, on the shady side of a pile of rocks, amidst masses of reeds and in long grass; it sometimes lies out in the open, exposed to the fierce heat of the midday sun.

It feeds during the evening, night and early morning, but may occasionally be seen on the move on cloudy or rainy days.

Like the other species of Rhino, it is never found at any very great distance from water, to which it resorts in the summer time to drink during the evening and at dawn. After the early morning drink, this Rhino, like its bigger cousin, wallows in the mud, which subsequently cakes all over its body, and helps to smother the ticks which attach themselves to the softer or thinner portions of its skin.

In the winter season its visits to water are not so frequent or regular. When feeding, these animals are obliged to cover a great extent of ground to procure sufficient nourishment for their huge bodies.

It is indeed surprising how they obtain a sufficiency of food from the stunted, sparse, scrubby, sun-parched bushes, which is the only vegetation in many of the localities frequented by the Rhino.

The Black Rhinoceros, in localities where it is not hunted, usually deposits its dung in shallow hollows, which it scoops out under a tree or bush. These spots are visited regularly until a great pile of excrement has collected, which the Rhino scatters at frequent intervals with its horn. Regular beaten tracks are often seen leading to these deposits, or from one to another. This cleanly habit, which is common to other species of Rhinoceroses and many other species of animals, tends strongly to keep infectious animal diseases in check.

This great beast invariably lies with its hind-quarters to the wind, and when alarmed makes off at a rapid swinging trot up-wind, with its tail twisted over its back. When closely pursued it breaks into a gallop, which can be kept up for a considerable distance, and a good horse is required if the hunter desires to successfully run it down.

The flesh of a Rhino, although coarse, is, when in good condition, considered very palatable. Like the other species, Black Rhinoceroses are quite easy to stalk if their bird sentinels do not happen to be present. The experienced hunter, before attempting to approach within easy range for a fatal shot, examines his intended quarry very carefully with a pair of good field-glasses, and should he detect any

Rhinoceros Birds on it, he knows he must proceed to stalk the beast with the utmost caution. After a long and tedious stalk, the hunter is frequently detected by the birds, which at once give the alarm to their host. Should no birds be present, the hunter stalks the animal more rapidly, knowing that so long as he keeps on the proper side of the wind, and takes reasonable care not to expose himself, he will almost to a certainty get within easy shooting distance.

When disturbed, the Black Rhinoceros moves off with its head well elevated, and if a cow has a calf with her, it follows its parent instead of preceding it.

The White Rhinoceros, on the contrary, makes away with its head held low, and when a calf is present it always precedes the mother.

The Black Rhinoceros also differs from its meek and inoffensive relative in its temper, which is morose, irritable and uncertain. When wounded it frequently charges down upon its persecutor, but if he is able to get out of the way in time, it usually, but not invariably, passes straight on, and does not turn to seek him out. It has been known to charge without provocation through a team of oxen, donkeys, or a camp, meanwhile lunging right and left most viciously with its horn.

The eyesight of the Rhino is bad, otherwise it would prove a most dangerous antagonist. When wounded it will often charge blindly in the direction of the sound of the rifle.

When warned of danger by its bird friends, the Rhino charges off more or less blindly, and as likely as not right in the face of the stalker, who usually imagines he has been observed by it, and that the charge is a deliberate one.

Major Stevenson-Hamilton relates an instance of a gentleman who obtained a permit to shoot one Rhino. The victim happened to be a cow; and its calf, infuriated at the death of the mother, charged down upon him. He secured a temporary sanctuary on top of a termite heap, and the youngster, which was as big as a donkey, ran to and fro from its dead mother to the heap, squealing with both rage and grief. Not having a permit to kill more than one Rhino, he hesitated to shoot, and it was only after both he and the party had been held up for two hours that he shot it through a non-vital, fleshy part. For some time afterwards it continued to threaten him, but eventually retreated, much to the relief of the party.

In former days, when this species of Rhino was plentiful, it was a constant source of annoyance to travellers, by suddenly jumping up and charging down upon them. The charge of so huge and clumsy an animal into the midst of a number of native carriers, and a team of donkeys or oxen, was most disconcerting and dangerous, for one stroke of the great horn usually results in death for man or beast.

The so-called horn of all Rhinoceroses is a collection of closely-packed fibres, growing from the skin;

the slightly hollowed base of the horn rests upon a bony elevation which grows from the skull. When skinning the head, the horn can easily be detached from the skull.

Although one long, front or nose horn and a small back one is the rule, specimens have been obtained with both horns of equal length, and others with three and even five horns.

Formerly these varieties were divided into local races or sub-species, but they are now regarded as individual eccentricities, and in consequence only one species is recognised throughout the extensive range of this animal.

The Black Rhinoceros is dark slaty-grey, and is not noticeably darker than the so-called White species. However, it is smaller and lighter than the other; its length from nose to root of tail averages about 10 feet, and the height at the shoulder 5 feet. Its upper lip is elongated and prehensile, and the head is much shorter than that of the White Rhinoceros. The skin is hairless, thick and almost smooth, and the eye is small. An adult living female was weighed and scaled 1080 lbs.

In addition to the two species of Rhinoceroses which inhabit Africa, there are three other species in eastern countries, viz. the Great Indian Rhinoceros (*Rhinoceros unicornis*), the Javan Rhinoceros (*Rhinoceros sondaicus*), and the Sumatran Rhinoceros (*Rhinoceros sumatrensis*). The two former have a single horn each, and the latter two horns.

THE ROCK OR KLIP DASSIE

Also known as the Rock Rabbit and Coney

(*Procavia capensis*)

Imbila of Zulus, Swazis and Amaxosa; Ipila of Basuto.

The naturalists of the past classified the Dassie as a rodent, viz. in the same class as hares, rabbits, beavers, rats, etc., owing to its rodent-like incisor teeth, general shape and habits, which are similar to those of many of the rodent tribe of animals.

However, careful examination of the molar teeth, feet and internal anatomy made it clear that they were really relations of the Elephant, Rhinoceros and other animals of that class, so they were placed in the order known as *Ungulates* or Hoofed Animals. It will therefore be seen that a Dassie is in no way related to rabbits, hares and other rodent animals.

Although belonging to the hoofed class of mammals, they have no close relations among them. The structure of their feet would lead us to infer they were more closely related to the Elephant and the Rhinoceros than to any of the other members of the hoofed tribe of animals.

The Klip Dassie inhabits the krantzes and stony hills of South Africa, and is common in such local-

The Klip Dassie, Coney, or Rock Rabbit, inhabits the stony hills and krantzes, and hides in the crevices between the rocks.

ities throughout the Cape Province and Natal. It also, however, occurs in other parts where the environment is suitable to its existence.

The Klip Dassie was evidently known to the ancients, for in Psalms civ. 18, in the Bible, the rocks are mentioned as being a refuge for the conies. The Syrian species of Dassie or Rock Rabbit (*Procavia syriaca*) is commonly called a Coney, and is the species probably alluded to.

The word Dassie or Dasje is Dutch and means Badger, therefore Klip Dassie is literally Rock Badger. Dassie is the Africander way of spelling it, and Dasje is the High Dutch way.

The Dassie, however, is in no way related to the Badger. The only near relative of the Badger in South Africa is the Honey Ratel, which belongs to the order of animals known as *Carnivora*.

The Rock Dassie is truly a wonderful example of the adaptation of animals to their surroundings. In this instance we have an animal which is practically defenceless. Beyond a few feeble attempts to nip its aggressor with its curved front or incisor teeth, it offers no active resistance. Therefore, lacking any effective means of defence against its many enemies, it adopts a negative one, as we shall presently notice.

In the far-distant past South Africa had an excessive rainfall, and the country was clothed with dense forests, interspersed with great stretches of rank grasses, lakes, rivers and gushing springs which, unlike most of those of to-day, flowed all the year

round. At that period the Klip or Rock Dassie, no doubt, was arboreal, that is, it was an inhabitant of the trees.

In the course of time the climate changed. This change was gradual, and the rainfall slowly but surely diminished. The lakes began to dry up, and the springs and rivers decreased in volume, and in consequence the less hardy vegetation died off. The struggle for the survival of the fittest in both the vegetable and animal world began in grim earnest. Great numbers of species of plants perished, and their kind became extinct. Others slowly but surely adapted themselves to the changing conditions by modifying their structure, and to-day we have plant life which has specially adapted itself to survive in the vast inland stretches of the country where the rainfall is small.

During this long period the forests were slowly vanishing and being replaced by stunted Karoo bushes and the hardy Mimosa trees and grasses.

The hills and mountains became increasingly bare, and to-day over great stretches of country we see but their skeletons, for the fertile soils and vegetation which once clothed them, have been washed down into the valleys, and now constitute the soil of the veld.

So to-day we have the spectacle of hills and mountains covered with loose boulders and bare outcrops of rocks, crannied, fissured, caverned and eroded.

There was no room in the ever-diminishing forests

for the Dassies, and in many districts the forests disappeared altogether; therefore these animals were obliged to change their mode of life or perish, as was the case with the squirrels which are so abundant on the Karoo, and which live in burrows underground, instead of in the trees, as did their remote ancestors.

Failing the shelter of hollow trees, the Dassies sought sanctuary among the crannies and fissures of the stony hills.

However, all of them did not adopt these habits of life. Some remained in the forests, which along the coastal districts grow with undiminished vigour. These are known as Bush Dassies, of which more anon.

The Klip Dassie lives in small parties of a few individuals to a dozen or more. Wherever there is rough, broken, stony country, the Klip Dassie is to be found. They are by no means confined to the drier inland portions of the country, for in Natal, where the rainfall is abundant, and the vegetation in many parts semi-tropical, the Dassie abounds along the edges of the various table mountains, and ridges of rocks on the hills.

This animal never attempts to burrow. It lives in the natural crevices and holes among the rocks, and may be seen at almost any time of the day lying sunning itself on the smooth boulders. One of the party is always on the watch, and the instant it becomes alarmed it utters a shrill, hissing

scream or squeak, several times repeated, whereupon all those in the neighbourhood scuttle off and take shelter. Should a rock crevice be large, as many as a dozen will take refuge in it.

The Dassie is wonderfully active among the rocks, and jumps, hops, runs and climbs with noiseless tread and marvellous agility.

Its powers of climbing and clinging to steep, rocky surfaces is considerably aided by a special apparatus on the foot. The naked soles are covered with thick skin; this is kept moist all the time by sweat, which is secreted by the sudorific glands. These are really sweat glands, which are very abundant in the sole of the foot of the Klip Dassie. In addition to this, there is a special set of muscles which cause the sole of the foot to contract, and forms a hollow, air-tight, saucer-like chamber in the centre, which enables an animal to cling with great tenacity to an almost perpendicular rock. Those who are not aware of this wonderful suctional power of the foot, are astonished beyond measure when they shoot a Dassie, and observe its dead body clinging to a smooth, almost perpendicular rock surface.

It is very tenacious of life, and even when riddled with shot will struggle bravely on until it reaches its lair, into which it drags its dying body and perishes miserably.

The Dassie retires to its lair at night, and issues forth to feed on the surrounding vegetation during

the early hours of the morning and evening, before darkness has set in. It also ventures forth on moonlight nights in search of food.

During the day it basks in the sun on the most exposed rocks in the neighbourhood of its lair. Its diet is purely vegetarian, and consists of the leaves, tender shoots, bark and grasses growing in the vicinity of its home. When vegetable gardens are in close proximity to their haunts, the Dassies occasionally venture down to them and do some damage, but unless severely pressed by hunger during times of prolonged drought, they rarely venture from their rocky retreats, for, if surprised fifty or a hundred yards from any rocky place, they can easily be run down by a man on foot and captured or killed. On several occasions we have succeeded in heading them off from the rocks, when we had suddenly surprised them a short distance from their rocky habitat. In each instance we captured them after a short, sharp run. At Bethelsdorp, near Port Elizabeth, the Hottentots have vegetable gardens on a narrow strip of ground between two rocky hills. The rocks descend down to within a dozen yards or so of the gardens, and although these rocks are swarming with Dassies, the Hottentots informed me they never did any harm to the vegetables.

Although the Rock Dassie does not fulfil any important mission in life from an economic point of view, as far as humanity is concerned, yet it does no harm; and the wanton destruction of these

innocent creatures, which enliven the desert-like parts of South Africa, should be distinctly discouraged.

The young are born in a nest in a rock cavity. The number at a birth varies from two to three. One which we kept in captivity gave birth to two. On another occasion three were born. My taxidermist, when skinning another, discovered two within it. On yet another occasion we captured an adult female and three young ones, which appeared to be about two months old. These were all in the same lair, and evidently were the young of the female which we found with them.

It is an interesting sight to watch a family of Dassies out upon the rocks in the sunshine. The adults lie about, stretched out flat, ever and anon rising on their haunches and glancing inquisitively around, or stretching themselves, while the young gambol in and out of the rocks, playing hide-and-seek with each other, for all the world like domestic kittens at play. Should a twig crack under you in your lurking place, or should you inadvertently dislodge a pebble, the shrill warning scream of a sentinel rings out, and in an instant that happy family party have vanished from sight. The Klip Dassie is not only found among the bare or sparsely-covered stony hills. I have found them in abundance in rocky localities which were covered with a dense forest of trees. In a close creeper-covered forest near Pietermaritzburg, known as the "Town Bush," where,

owing to the interwoven creepers on the tops of the trees the sun rarely penetrates to the ground, I have seen colonies of Rock Dassies among the boulders, and have for hours watched their ways and habits from some adjacent place of concealment.

Although the Dassie does not burrow, it often improves its lair by scraping out all loose stones and earth, thus considerably enlarging its residence.

Requiring some Klip Dassies for exhibition at the Port Elizabeth Museum, I set off with a friend in a Cape cart, our destination being a Hottentot village some miles distant, known as Bethelsdorp. Arriving there, we secured the services of half-a-dozen gaunt, alcohol-sodden Hottentots, and with several fox-terrier dogs we wended our way up an adjacent narrow valley, on each side of which rose steep, rocky hills. Mounting the rocks we reached the brow of an eminence, and carefully peering over a boulder, I glanced down and surprised a score of Dassies basking on the rocks not more than ten yards distant. Simultaneously the danger-signal rang out, and the Dassies scattered in all directions, jumping from boulder to boulder, until all had found cover in various holes and crannies amongst the rocks. Noting a collection of boulders where several Dassies had disappeared, we proceeded there, and as expected, found a deep cleft. Calling the dogs, we were soon convinced by their wild excitement that some Dassies had sought shelter there. After tying up the dogs, our men, with the aid of crowbars and badly

developed muscles, eventually loosened a ton-weight boulder, and accompanied by guttural yells of excitement from the ferrety-eyed Hottentots, it launched itself forth, and with ever-increasing speed plunged into a deep pool at the foot of the hill, deluging my friend who, unknown to me, had sneaked off and lay under a shady tree sleeping off the effects of a poison known as alcohol, which he had partaken of at a dance the evening previous.

After dislodging about a dozen rocks, there, in a crack between two boulders, we caught a glimpse of some brown fur and two hind-legs. Seizing the legs, one of our men began to pull gently, then more forcibly; but no! the Dassie seemed part of the rock itself, and it was apparent if more force were applied its legs would be torn from the body; so we dislodged some more rocks and, huddled together, there lay a family of five Dassies. Then I found out something I had not known before about Dassies. The reason we could not pull them out of the crevice was because they inflated themselves and, like a swollen foot in a boot, could not be withdrawn except by using considerable force. They did not attempt to use their toes to aid them, they just distended their bodies, as do the various rock lizards when attempts are made to pull them from a crevice by the tail or back legs. In addition to distending its body, and thus jamming itself against the sides of the crevice, the Dassie also often adheres to the rock surface with the suction-pads on its feet.

Adult Dassies when captured often refuse to eat, or only nibble a little food, and in consequence soon die, but if placed in a large cage and kept secluded, they will start to feed and soon become reconciled to their new environment. The old ones never lose their fear of man and are always timid, and if attempts be made to handle them they snap at the fingers with their teeth. When captured young, or when almost adult, they soon become tame, and make interesting pets by reason of their quick, active, restless ways and gentle disposition. When first captured, Dassies are sometimes so terrified that they actually die of fright. I have seen instances of this.

When captured young and kindly treated, the Dassie can be tamed so thoroughly that it will not stray from the dwelling if given its liberty. When kept closely confined, Dassies become savage and morose, as do many other animals in like circumstances. This is distinctly cruel, and should not be permitted.

An animal dealer of my acquaintance was in the habit of keeping one or two tame Dassies. Wild ones when captured were placed with them, and they, observing the tame ones eat and show no terror at sight of the keeper, soon lost their nervousness and became tame in a short while.

In captivity Dassies must be kept cosy and warm, otherwise they will perish. They are very cleanly in their habits. A peculiar habit of the Klip Dassie

is that it deposits its excrement in some special place amongst the rocks, and in consequence a large accumulation occurs in course of time. This excrement becomes saturated with the urine, and eventually forms into a sticky black mass, in appearance like pitch, and is known as "Dassie Sweet." This is collected by the natives and is extensively used by them as a drug. Considerable numbers of colonists also use this substance at times. It is administered to them by native medicine-men, in whose powers to cure disease many farmers and others unfortunately have considerable faith.

The active principle in this substance seems to be saltpetre, for if allowed to remain exposed to the atmosphere under suitable conditions, it will undergo a chemical change, and pure nitre or saltpetre, viz. nitrate of potassium, will be the result.

In the Natal Government Museum at Pietermaritzburg there is a series of specimens illustrative of the formation of nitre from the excreta of the Rock Dassie. In Natal I have collected this excrement in all stages, from the black pitchy mass to the pure white nitre. Sometimes there will be an accumulation of this excrement on sandstone rocks overhanging a cave or rock shelter. The liquid portion slowly soaks into the porous rock, and for years after the solid portion of the excrement has disappeared, a black sticky substance will slowly exude from the lower surface of the rock which forms the roof of the rock shelter or cave. This forms into

small lumps, and is picked off and used as medicine by the natives. This is nothing but the liquid portion of the excrement which has slowly percolated by gravity through the sandstone. This substance is undoubtedly medicinal, for it is both Diuretic and Diaphoretic, that is, it is a kidney stimulant, and increases the action of the skin and produces perspiration. However, drugs which produce like effects can be had in a clean, pure form, and at a cheap price of any chemist.

In some districts the accumulations of this excrement are very great, and attempts have been made to float a company in order to work it for its market value as nitrate of potassium.

Along a ridge of rocks in the midlands of Cape Province, I have seen tons of it.

The Klip Dassie is kept from unduly multiplying by a host of enemies. The Bushmen and Hottentots of the past hunted them relentlessly. Their mode of attack was to creep upon them unawares when they were basking on the rocks, and hurl kerries or rounded stones at them. Then, hurrying forward, they endeavoured to secure those which had been crippled before they could reach a rock crevice. Then, again, they would spend hours in digging them out. Time is no object to a savage, and if after a day's labour he succeeded in securing a couple of Dassies he thought himself fortunate. The anticipation of a full meal of flesh, and a pelt to make a cap or loin-covering of, spurred him on.

The Kafir boys of to-day amuse themselves by hunting the Dassie with kerries. Two or three boys will silently steal up within throwing distance and simultaneously hurl their kerries, which are sticks with knobs on the end.

The flesh, although edible, is not often eaten by Europeans, as it is dry and tasteless; and, moreover, after the large paunch is removed, the quantity of flesh upon the bones is surprisingly small.

The principal enemies of the Dassie among the lower animals are the various species of wild cats, chief among which are the Leopard, Serval, Lynx and Kafir Cat. The Mungoose and the Muishond also prey upon it. The smaller of the Mungooses, and the Muishonds, of which there are two kinds, viz. the Striped Muishond and the Snake Muishond, are especially dreaded by the Dassie, for, owing to the slender nature of their bodies, they are able to pursue and follow the Dassie to its innermost lair. Therefore, seek shelter where they will, they are at the mercy of these fierce and bloodthirsty little carnivorous animals.

The Eagles also levy a heavy toll upon the Klip Dassie, and in spite of their watchfulness, these wary birds frequently succeed in surprising them out upon the rocks, or when feeding.

Their greatest enemy among the Eagle tribe is Verreaux's Eagle (*Aquila verreauxi*), which is known to the Dutch as the Dassie-vanger, which means Dassie-catcher. The home of this bird is among

the high mountain ranges, from which it makes extensive flights in search of food, which consists largely of Klip Dassies.

The Southern Lammergeyer (*Gypætus ossifragus*), known to the Dutch as the Lammervanger, which means lamb-catcher, is another bird which haunts the mountains and preys on the Dassie.

In Natal, Zululand and some other parts of South Africa, the Python (*Python sebæ*) is a formidable enemy of the Dassie. This great snake, which attains a length of 20 feet, lies concealed in the rocky haunts of the Dassie, and captures them when they happen to come within reach. Lying coiled in a clump of bush, the snake, with an incredibly swift motion, darts out with gaping jaws, and should it succeed in getting a grip with its sharp recurved teeth, there is no hope of escape for the victim, for in an instant the great coils are around it, which within a couple of minutes crush the life out of it. The Dassie is then swallowed whole.

A belief is widespread in South Africa that there is a snake of great size which lives among the rocks. It is alleged to possess the body of a snake, and the head and shoulders of a Dassie. It is known as the Dassie-Adder. Needless to say, there is no such snake. The belief probably had its origin in a Hottentot or other native suddenly coming across a Rock Leguan (*Varanus albigulanis*). The man no doubt rushed away in an extremity of terror, and his distorted imagination deceived him into

the belief that it was a monster snake, and so the belief was spread. A considerable number of utterly foundationless beliefs in regard to snakes, their venom and the treatment of snake-bite, are implicitly believed in by large numbers of colonists. These and numbers of others in regard to the treatment of stock, and disease in human beings, have been absorbed from the Hottentots and Kafirs.

There are a considerable number of species of Klip or Rock Dassies in Africa north of the Zambesi, and in Arabia and Syria, but there is only one kind in South Africa.

The Klip Dassie is the size of an adult rabbit, but it is minus a tail, and the ears are short.

The fur is soft and fine, and dark sepia-brown in colour. The lower parts are whitish. The limbs are short, and the body full and plump. The eyes are small, black and rather prominent.

THE TREE DASSIE

Also known as the Bosch Dassie and the Boom Dassie

(*Procavia arborea*)

Unlike its cousin, which lives among the stony hills, the Tree Dassie inhabits the forests of Africa, and it makes its home aloft amongst the branches of the trees. They have no claws to the feet, and do not grip the branches, but, nevertheless, they are

The Tree Dassie.
They inhabit the forests of South Africa, and lurk in holes in old tree trunks.

marvellously quick and sure-footed. They run along the boughs and leap with the greatest of judgment.

The lair of the Tree Dassie is in the hollow trunks of the trees, and the cavities in large branches. In the virgin forests of South Africa there are great numbers of old trees which afford ample shelter for the Bush Dassie within their hollow interiors. In these cavities they sleep at night, seek shelter from the rain or their enemies, and rear their young, which average three at a birth.

The Bush Dassie is common in the forest districts of the eastern parts of Cape Province, and extends north at least as far as East Africa. It was common in the vicinity of Port Elizabeth in the past, but owing to the extensive felling of the native trees which afforded the requisite shelter, it has disappeared, although it is still common in Alexandria District.

On one occasion I was present when a Sneezewood tree was cut down. It proved to be hollow, with an opening between two branches at the top of the trunk, and within the cavity we found a family of Tree Dassies, which we could not dislodge until the trunk was cut across. We poked them out, whereupon they scampered off, and running up an adjacent tree, vanished in a few seconds.

A second species of Tree Dassie, known as Bruce's Dassie (*Procavia brucii*), occurs in Rhodesia, south of the Zambesi, and is therefore included as one of the South African animals, as, in a Zoological

sense, the territory south of the Zambesi and Cunene Rivers is termed South Africa ; and all animals, birds, reptiles, insects and plants found south of those rivers are catalogued as South African.

Bruce's Dassie is common from the neighbourhood of the Zambesi, north as far as Abyssinia. There are other species in Africa, but as they occur north of the Zambesi they do not concern us. The Tree Dassie is unique, for the reason that it is the only animal belonging to the hoofed or Ungulate Order of animals which lives in trees.

Its diet consists entirely of the vegetation of the native forests, including the plants which grow upon the ground, for the Tree Dassie, although it subsists largely on the leaves and tender shoots of the trees, freely descends to the ground in search of food, but will never venture far from the bush, into which it instantly runs on the slightest sign of danger. On moonlight nights the Tree Dassie ventures forth, and at these times, and during the early morning, their squalling cries, which begin with a clucking sort of noise, can frequently be heard.

Lying upon the ground under a dense bush in a forest in Natal, I was peacefully sleeping, wrapped in a waterproof blanket, when the stillness was broken by a noise overhead. I opened my eyes and beheld two dark forms scuttling about among the branches, one of which was evidently chasing the other with evil intent, for on overtaking it a scuffle ensued. Losing their balance they fell, and on

beholding me they ran off into the bush. They were Tree Dassies. Attracted evidently by the noise, and hoping to secure a meal, a Serval Cat emerged from an adjacent thicket and, with a bound, was nearly on top of me. I jumped up with a shout, whereupon it vanished as rapidly as it had appeared.

The Tree Dassie is a perfectly harmless animal, and does not the slightest harm in any way to man, and it should not, therefore, be persecuted by us. It is a strange trait in human nature, this inward prompting to take life, for when any creature is sighted, the impulse instantly arises to shoot it, or do it an injury by hurling a stick or a stone at it, or incite dogs to run it down. It may be sport to the hunter, but it is death to the animal. This desire to destroy the lives of innocent and often eminently useful creatures, is without doubt a survival of the destructive instincts of our remote savage ancestors when they were in, what anthropologists term, the Hunter Phase of culture or evolution.

When lying securely concealed in a dense thicket, it is an interesting sight to watch a family of Tree Dassies nimbly traversing the branches, pausing at intervals to listen intently, for the Serval or Bush Cat is an enemy the Dassie is in constant dread of, for with a spring it can launch itself from the ground straight up a tree trunk, or to a branch a distance of 8 to 10 feet, and seizing its prey with its front claws it drops with it to the ground.

The Leopard, the Caracal or Lynx, the Kafir Cat,

the Eagle Owl and the Python are all ever on the alert to snap up a Tree Dassie. The Eagle Owl, sitting silently on a large branch among the dense foliage in the early hours of the evening or bright moonlight night, drops like a stone upon any unwary Dassie which might run along a branch beneath it. So closely do these owls blend with the colour of the branches, twigs, leaves, and light and shade, that when sitting bunched up on a branch they are practically invisible, even to a Tree Dassie. Of the three species inhabiting South Africa, the Spotted Eagle Owl (*Bubo maculosus*) is the most persistent hunter of Tree Dassies. Its flight is noiseless, and in the gloaming it may often be seen gliding silently over the forest trees and dipping down into the glades, and should a Tree Dassie be sighted, a rapid dash is made at it.

Watching some of these Dassies one evening just before dark in a clearing in a forest, where they had descended to the ground and were feeding upon the sweet grasses, I observed an Eagle Owl suddenly appear over the tops of the adjacent trees. With shrill squeaks the Dassies scattered, but within two or three seconds of the appearance of the Owl it had dropped upon one and had it in its talons. Gripping it tight, the bird soon put an end to its life by a few blows on the skull with its beak. It then, without any further delay, began to devour it. After eating a portion, it flew off with the remainder, probably to serve as a meal for a nestful of young

ones. This owl is, nevertheless, of great economic value as a rat killer.

In many districts inhabited by the Tree Dassie the Python does not occur, but in the habitat of this snake the Dassie has a terrible enemy, for lying concealed along a branch with the tail gripping a twig, the Python drops upon its victim or makes a sudden dart, and once gripped by the strong, recurved teeth of the serpent, there is no hope of escape for the victim. When striking at their prey these snakes are exceedingly active and expert. I watched one of them strike at a large bird in a tree. The reptile was lying coiled on some branches, and the bird settled on a branch several feet away. In an instant the snake launched its body forward, seized the bird in its jaws, and swung the full length of its body, hanging from a twig which it gripped firmly with its tail.

The Dassie is not even safe from these dreaded snakes when lying snugly within its lair in the hollow trunk of a forest tree, for the Python, finding the entrance, insinuates its long body therein and captures and draws the inmate out, or should the cavity be large, it enters and forthwith proceeds to swallow every Dassie in that particular lair.

Such are the tragedies which are being enacted in the lower animal world. The town-dweller knows nothing of the teeming life of the forest, veld, mountain and stream. He is so engrossed in his own affairs and those of his kind, that it does not occur

to him that countless numbers of other living creatures are living out their lives, and under more strenuous conditions than is the case with him. Perchance if he should give a thought to them, it is with a desire to take a holiday, and armed with a gun sally forth and wantonly wound and kill them.

It seems so ordained that in order that any creature might live, it must be capable of protecting itself from the many enemies with which it is surrounded, and which are ever on the alert to kill it. Such is the way intelligence is evolved. It is an unceasing struggle for the survival of the fittest, and in that struggle those possessing the most efficient physical body, and the most intelligent brain, survive and perpetuate their species, and thus transmit their superior qualities to their descendants.

The Bush Dassie has disappeared from many districts owing to the felling of the trees, in the hollow interiors of which they found ample shelter. Whole districts in the past were denuded of trees, the wood of which was used for firewood and for fencing poles.

This Bush Dassie is the size of an ordinary rabbit. Unlike the rabbit, however, it is devoid of a tail, and its ears are small. It can at once be distinguished from the Klip or Rock Dassie by its grey fur, and a white patch which is present on the lower part of its back. Bruce's Dassie differs but little from

the typical South African species. The only external difference is, the patch on the back is yellowish instead of white. However, in the Alexandria District of the Cape Province I procured a specimen on which the patch is distinctly yellow, and not white.

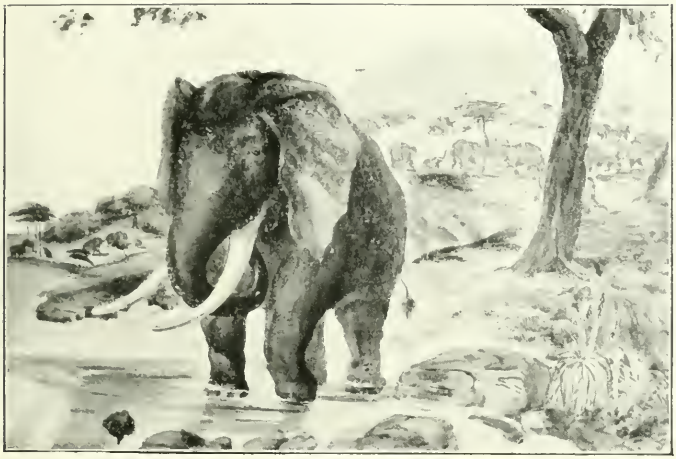
THE AFRICAN ELEPHANT

(*Elephas africanus*)

Indhlovu of Zulus and Amaxosa; Incubu of Matabele; Thloo of Bechuanas; Tlo of Barotse; Thlo of Ngami; Muzovu of Chila; ˛Tepo of M'Kua; Njovu of Waganda, Chilala and Chibisa; Arb of Galla; Dakana of Danakil; Fȳl of Sudani; Giwa of Hausa; Marodi of Somali; Zahon of Abyssinia; Temba of Swahili.

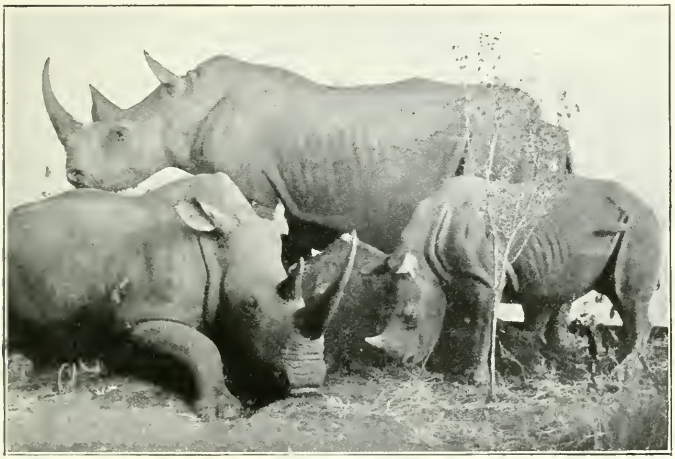
The African Elephant, or Oliphant of the Dutch colonists, inhabits the wooded regions of Africa from the eastern parts of the Cape Province to the Sudan. It was formerly common all over South Africa, even in the vicinity of what is now Cape Town. Elephants were abundant in the Cape Peninsula in the early days of Van Riebeck about the year 1653. An Elephant was shot not far from Cape Town in the year 1702. In 1761 they were common immediately north of the Oliphant River in the district of Clanwilliam. In the more densely wooded eastern parts of the Cape Province, Elephants were systematically hunted for sport and profit until about the year 1830.

In Natal, Elephants survived the constant persecution to which they were subjected till about 1860. Beginning at the Cape, the extermination of Elephants proceeded north, west and east, and to



The African Elephant.

From a painting by Captain W. Cornwallis Harris, 1840.



A mounted group of White or Square-lipped Rhinoceroses in the National Museum of Natural History, U.S.A.

From the American Museum Journal.

save this wonderful descendant of the extinct Mastodon and Mammoth, the few survivors that remained were taken under Government protection. At the present day about 150 Elephants exist in the Addo Bush and a few in the Knysna forest in the eastern part of the Cape Province, in the districts of Knysna, Uitenhage and Alexandria.

A few still linger in the dense bush on the border of Swaziland and the Transvaal, and in Portuguese East Africa from the Maputa to the Limpopo River.

In Southern Rhodesia, and in Portuguese territory, between Beira and the Zambesi, a goodly number are to be found.

North of the Zambesi Elephants still live in large herds, especially so in the Congo regions.

In January 1918 Zululand's last Elephant was found dead on Mr. Manie van Rooyen's farm on the north bank of the Umfolozi River. The animal was one of a large herd that used to inhabit the banks of the Umfolozi and the Dugugugu forest, during the early part of Cetewayo's reign. Cetewayo organised a big hunt to get certain portions of their bodies for medicine. When on one occasion two were killed (a large bull and a cow) and several wounded, one of the latter managed to kill one of the chief's best hunters, who got too daring while creeping through the reeds after a wounded animal, and found himself almost under it. An eye-witness who tells the story, says the man's rifle was thrown

quite a hundred yards away, and he was torn and trampled to pulp. The whole herd broke away and only this one Elephant was left, and all the old natives believe he was the one that killed the hunter. He has been the only one in Zululand from that time. The tusks measure about 7 feet 6 inches. Occasionally Elephants cross the Zululand border from Portuguese territory.

The African Elephant inhabits the forest districts, but does not confine itself to the dense jungles, as does its Indian cousin. When frequently persecuted it retires deep into the forests, but in districts where it is not subjected to persecution, it wanders in herds through the bush-veld and comparatively open, broken country. They are gregarious, and may sometimes be seen in great herds of from 300 to 400 individuals. These large herds are usually composed of cows, calves and immature bulls. The adult bulls associate in small herds or bands of half-a-dozen to about a score, or go about in twos, threes, or singly, during the dry season.

On the approach of the breeding or mating time, which is during the rainy season, the bulls are found associated with the females.

Solitary bulls, according to Selous, are not more vicious than others, and are even less aggressive than cows and young bulls. This, however, is not so with the herds of Elephants in the Addo Bush. During the past dozen years several solitary bulls have been shot on account of their savage attacks upon people

and property. Until recently two old bulls were a constant source of dread to the Europeans and natives in the neighbourhood. A Hottentot herd man, accompanied by a terrier dog, penetrated a portion of the Addo Bush one day in search of a missing ox, and when traversing a sparsely-wooded portion of the bush, a big bull Elephant suddenly charged down upon him. He had barely time to creep beneath a dense patch of thorny Mimosa scrub before the beast was upon him. It stamped furiously around the tangled bush, which bristled with long, sharp thorns, vainly seeking an opening through which to thrust in its trunk. It made desperate efforts to smash the bush by sheer weight, but without success. It stood staring at the trembling Hottentot for a few minutes, apparently thinking intently. Then, turning round, it deliberately backed into the stout, thorny scrub and endeavoured to sit on the miserable man, who squirmed and wriggled frantically. After several attempts, the Elephant succeeded in crushing down the stiff thorny branches to such an extent that the man was in as much danger of death from the sharp, three-inch long thorns, as from being sat upon by the Elephant. While this performance was going on, the Hottentot's terrier dog had been badgering the Elephant, especially so when the great beast was attempting to sit upon his master. Irritated and infuriated by innumerable stabs from the thorns and the barking of the dog, the Elephant, with a

scream of rage, charged the little creature. This was the Hottentot's opportunity, and, gliding from his thorny retreat, now nearly demolished, he sped away into the dense bush, and eventually reached home, punctured all over with thorns.

During times of drought the Addo Elephants, driven almost mad with thirst, often break out of the bush during the night and make their way to the farmers' dams, and do considerable damage. It is a common occurrence for them to break down fences in the neighbourhood. Some of the exasperated farmers shoot at them whenever they appear, and set spring-guns at various exits from the bush. A farmer who lives on the outskirts of the Addo Bush employs a man for the sole purpose of repairing the damage done by Elephants to his fences. There are at least three herds of Elephants in the Addo Bush, and several parties of five or six to a dozen individuals. These Elephants retire to the densest portions of the forest in a great kloof known as Long Kloof, and during the daytime and at night they issue forth to feed, and traverse considerable distances, visiting isolated patches of bush in the neighbourhood. There are regular beaten tracks which they traverse nightly. To reach some of their feeding grounds they are obliged to travel over open, treeless veld. They take care, however, to get back to sanctuary in the densely-wooded kloofs before dawn.

Several of the Elephants in the herds are in a

crippled condition owing, no doubt, to injuries received from rifle-shots or spring cannons, which are sometimes set in their tracks. An Elephant bull which was shot in this bush some years ago had several rifle-bullets in it, as well as a brass cannon-ball an inch in diameter.

A farmer living in the vicinity of the bush, said that he firmly believed the majority of the Addo Elephants " were full of lead."

The only way by which the farmers can save their dams and fences at times, is by blazing into the herd with rifles.

A Hottentot was chased by a small herd of these Elephants one day, and in order to escape he fired the herbage in his rear. The Elephants deliberately stopped and stamped out the fire, possibly imagining it to be some new kind of enemy. Several Europeans and natives have been killed at various times by the Addo Elephants.

A farmer who had shot an Elephant on the outskirts of the bush, followed the herd into cover. He was stalked by an old cow Elephant and slain, the animal pounding his body to pulp.

A Hottentot proceeding home along one of the roads through a portion of the bush was met by an Elephant, which immediately charged, overtook and killed him.

Sometimes cattle wander into the bush, and the Elephants, resenting their presence, slay them.

An old bull Elephant, locally known as " Baard-

man," was greatly dreaded by both Europeans and natives living in the vicinity of Addo Bush. He charged out one day on a Dutchman named Vermaak and killed him. On another occasion he waylaid an inoffensive native, and with a stroke of his trunk knocked him down and pounded his body beyond recognition. A Hottentot, seeking lost cattle on the outskirts of the bush, was stalked by this vicious old Elephant. The man fled, pursued by this great beast, and when almost overtaken he spied an Aard-Vark hole, down which he crept. The Elephant raged, stamped and tore up the soil in masses with his tusks, but realising his intended prey had escaped him, he sullenly retired. On another occasion a Hottentot sought sanctuary down an Aard-Vark hole, but his pursuer did not realise he had escaped into the earth, and concluded he was up a tree. Determined to pound the life out of the man, he systematically tore down every tree in the immediate vicinity of the Aard-Vark hole, and scattered them over the ground. Knowing by his keen sense of smell that the man was concealed somewhere near, he stamped up and down and round about until all the herbage had been flattened out. At last, utterly baffled, he retreated. An hour later the half-smothered Hottentot crept out and sped away to safety. This old bull was a terror to poachers. There was another rogue bull Elephant. He was as vicious as "Baardman," and his reputation for unprovoked assaults on

men and animals were as bad as that of the other. Making his way early one morning to a farmer's dam, he released the spring of a cannon set at the side of the track. He was mortally wounded, but managed, with the assistance of his wives, to travel some distance. He eventually collapsed, and for several days this old chieftain was tended and guarded by the cows. A couple were seen to pay regular visits to a neighbouring dam, and returning, they squirted the water down the dying Elephant's throat. The others kept guard over him during the night, and on the approach of day covered him carefully with leafy branches torn from trees, to shield him from the hot sun and flies, and to conceal him from possible discovery by enemies. Meanwhile the cows retired to the adjacent bush, and no doubt one or more of their number kept a vigilant watch over their expiring lord. For three or four days after he died the cows kept guard over his carcase. By the time my taxidermist and party were able, with comparative safety, to approach, the body was decayed. However, we secured the skeleton and tusks for the Port Elizabeth Museum. We found the ground and herbage, all round the body of the Elephant, stamped down by the cows, who had been watched from afar, walking round and round, doing sentry-go, stopping ever and anon to caress their dying lord. Although the cows had retired, they still lingered in the neighbourhood, for while my men were busy carving up the carcase, the entire

herd came charging down upon them. Luckily the men heard them coming while yet some distance away, and managed to escape in time.

A few years ago a sportsman stalked a small herd of Addo Elephants, and mortally wounded the bull. The cows made off, but finding the bull was unable to follow, they quickly returned. Some of them made a furious charge at the sportsman, who rode off to escape them. The others, meanwhile, ranged up on either side of the wounded bull, and supported him with their bodies, trunks and tusks. In this way they helped him along towards the heart of the bush, but their aid was in vain, for he eventually laid down and died.

On another occasion a party of sportsmen in search of Buffalo surprised a herd of Elephants in this same bush; one was a herd bull and the rest were cows. On the instant several cows hustled and pushed the bull off through the dense, tangled bush, while the remainder formed up in the rear, and so threatening was their demeanour, that had a shot been fired they would assuredly have charged down upon the party. It is extremely dangerous for a man to penetrate deep into the Addo Bush in pursuit of Elephants, for the various trees of which this great bush is made up only average from 6 to 12 feet in height, and are in consequence of no use to climb into should the Elephants become aggressive. The bush is too thick to make it possible to hunt the Elephant on horseback, and a man stands a very

poor chance of escape on foot, owing to the keen sense of smell possessed by Elephants.

A native traversing a pathway in the bush met a bull Elephant. It instantly charged him, and the man fled in wild alarm along a pathway in the bush. Losing his scent, the Elephant made a circular detour until he picked it up, whereupon he charged in the direction of the native. The man again doubled and got behind the beast, which again lost the scent. Once again it made off in a wide circle, and the moment it sniffed the tainted air it charged up-wind. Time and again these manœuvres were repeated by man and beast, until eventually the native reached the neighbourhood of a farmhouse. This old Elephant, having been shot at more than once from this particular farm, was unwilling to again venture into the open in its vicinity, so the native ultimately escaped.

Although so ponderous and huge, the tread of these animals is soft and inaudible. This and their keen powers of scent make them dangerous beasts to tackle in their forest retreats.

During the hot weather Elephants sleep in a standing position under the shade of a tree, their large ears moving like punkas all the time to cool their bodies and to drive off winged insect pests. But for the moving ears an elephant would often be passed unnoticed, so closely does the light and shade blend with their earth-coloured bodies. When the foliage is disturbed by a breeze, the moving

ears are not so likely to attract attention, and cases are on record of men actually walking up to within a yard or two of an Elephant before seeing it. Elephants feed during the night and early morning. In the summer season they drink nightly, but not so frequently when the weather is cooler. They love to wallow and squirt water over themselves.

Their diet consists of wild fruits, berries, twigs, leaves, various kinds of succulent plants, roots, bark, etc. They seldom eat grass. The Elephant is equally at home in flat forest country, or in broken hilly parts. They go up-hill at a slow, deliberate pace, but come down with a rush when disturbed, often sliding on their haunches with their hind-legs doubled under them.

They are excellent swimmers, and swim with the trunk held high up, and very little of the body showing.

When feeding they spread out over a considerable area, and in districts where they are persecuted they are almost constantly on the move. When alarmed the pace is a shuffling trot, swift enough to overtake a man on foot, after a short run. When hard pressed by a hunter they soon get exhausted, and frequently draw water from their stomachs with their trunks, and squirt it over their heads to cool and revive themselves.

The period of gestation of the African Elephant is not known, but it is assumed it is the same as the Indian species, which is about twenty-one months.

The calf is suckled by the mother for about two years. It sucks with its mouth, and not with the trunk. The latter, at first, is short and not very flexible. The milk tusks are shed at from five to six months. A hunter related to me how in Northern Rhodesia he encountered some Elephants. Among them was a tusked cow with a newly-born calf. She pushed her tusks under the calf, lapped her trunk over its body and carried it off.

Should one of its legs be broken, or the bone badly damaged, an Elephant is helpless. The Boer hunters of the early days took advantage of this, and riding alongside an elephant, the hunter would shoot at the knee, and if successful he at once made off in pursuit of the herd, crippling as many animals as he could before the herd escaped to cover. Returning at his leisure, he killed the helpless Elephants. In those days the guns were of the flint-lock and percussion-cap type, and it often required a number of shots, fired at close range, to kill an Elephant. A single well-directed shot with a modern rifle will kill one of these great animals.

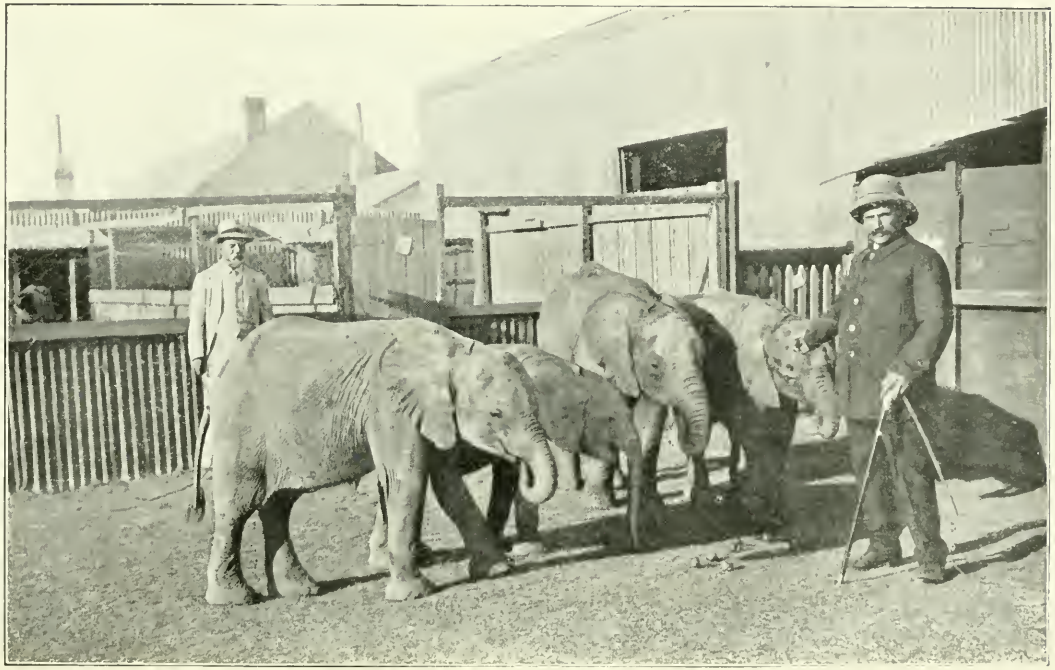
The sense of smell is exceedingly keen in the Elephant, but sight and hearing are dull.

Although under exceptional conditions Elephants attack men without provocation, as is the case with some of those in the Addo Bush, yet by nature they are shy and timid, and when persecuted will rush away for miles in wild alarm on getting the faintest whiff of the scent of a man. When pursued and in

danger of being overtaken, one of the herd will often fall to the rear, face about and charge. This is truly a splendid example of self-sacrifice of the individual for the good of the many. Sometimes short charges in the direction of the approaching enemy will be made, with the endeavour to delay his advance sufficiently to allow the herd to escape.

When wounded, an Elephant will often charge a hunter, and many a man has in this way been slain. When inclined to charge, the Elephant cocks his ears, holds his tail straight up and carefully surveys his surroundings, meanwhile endeavouring to locate his foe by raising his trunk and sniffing the air. The moment he detects his foe by sight, sound or scent, he charges down on him, usually screaming loud and shrilly with rage. When charging, an African Elephant holds its trunk hanging down in front of its chest, and not drawn up under the jaws like the Indian Elephant under similar circumstances. The most dangerous and vicious Elephants are the tuskless females. A charging Elephant, as a general rule, can be turned by a bullet, even should the bullet not strike him in a vital part. When alarmed, Elephants go off at a shuffling trot, and never break into a gallop. They cannot maintain this trot for long, and soon settle down to a swift swinging walk, often not pausing for many miles. The old Dutch hunters termed this long, swift step " de long stap."

Captain McQueen, an African explorer, had an alarming experience with an elephant. He wounded



Young African Elephants from Northern Rhodesia awaiting shipment to Europe
from Port Elizabeth.

one and it charged. Knocking him down it sought to pound the life out of him. Each time it brought its great foot down with the force of a steam-hammer he squirmed out of the way. Several times he succeeded in escaping the descending foot by twisting and writhing. Eventually the foot caught his right arm and pulverised it. This was the animal's expiring effort, for it staggered a few paces and dropped dead.

More or less decomposed remains of Elephants' skeletons, chiefly tusks and teeth, are often found in the vicinity of Port Elizabeth. A very large tusk in a decayed condition was found in the heart of a dense thicket a couple of miles from the city. It had been hacked from the head, and showed the rough axe cuts. It had probably been concealed in the thicket by some ancient aboriginal hunter and never reclaimed, for no European would have hacked off so valuable a tusk in so crude a manner.

The flesh of the Elephant is coarse in the grain, but is of fair flavour, and is relished even by Europeans. The portions favoured for food by the Boer hunters of old were the thick part of the trunk, the fatty flesh in the large hollow above the eye, the heart and the foot. The latter was usually baked with its skin on, in a hole in the ground. To bake a foot thoroughly in this manner was a rather lengthy process, for a good fire had to be kept constantly burning over the spot for about forty-eight hours. When thoroughly baked in this way, the

flesh of the foot became so soft and gelatinous that it could be scraped out with a spoon.

It has been asserted that the African Elephant is too vicious and unreliable to tame and train for uses, such as those to which the Indian Elephant is employed. Experience and experiment have, however, proved the African species to be as amenable to training, and as docile and intelligent as their Indian cousins.

The chief objection is the great cost of feeding such huge beasts. However, for military transport purposes under favourable conditions, and in expeditions into the interior of Africa, for instance, they should be of great value. In Classical times African Elephants were captured in large numbers and trained for military purposes. There are records which show that Elephants were used by Ptolemy Euergetes, 246–221 B.C., in military expeditions.

When natives succeed in killing an Elephant, every part of the carcase, except the intestines, are utilised. Every pound of the flesh is eaten, the skin is converted into whips, or cut up into strips and bartered to traders along with the ivory; the skin of the stomach is converted into a blanket, and the oil-laden marrow bones are broken up and boiled.

Wholesale destruction of Elephants occurred in the past for the sake of the ivory, which had, and still has, a high commercial value. In most, if not all, of the African States, Elephants are now under the protection of the various Governments; but,

nevertheless, in the remote districts considerable numbers of these animals continue to be destroyed.

The ivory is from the tusks, and it is of two kinds, viz. hard and soft. The hard ivory is from the Elephants which inhabit the dry western side of Africa; and the soft kind is from the Elephants living in the moist, densely-wooded, eastern side of the Continent. The soft ivory commands a higher price than the other. Apart from its hardness or softness, Elephant ivory varies in quality. The tusks of old bull Elephants vary considerably in size, and attain a length of about 11 feet. They may weigh from 50 to 100 lbs. or more. Average herd bulls possess tusks weighing about 50 lbs. each, while the average for old bulls is from 60 lbs. to 80 lbs., and measure about 6 feet in length, one-third of which is embedded in a socket in the skull. These large tusks vary in circumference from about 18 to 24 inches at the base.

The largest tusk on record is 11 feet $5\frac{1}{2}$ inches long, $18\frac{1}{2}$ inches in circumference, and 293 lbs. in weight. This is in the American National Collection, and came from East Africa.

The tusks of average adult cows weigh from 12 to 24 lbs. each. Tuskless Elephants are rare in East Equatorial Africa, but are not uncommon in the south.

The African Elephant is larger than the Indian species; it differs also in the shape of the skull and the ears, which are very large. It also has a more

lanky appearance, and its back between the shoulders and the rump is concave; whereas in the Indian Elephant it is convex.

It is the largest and heaviest of all land animals. An adult bull stands from 10 to 11 feet at the shoulders, and about 12½ feet from the eye to the root of the tail, and the circumference of a fore-foot averages 5 feet. The skin is rough slate-colour and sparsely covered with black bristles, which are hardly noticeable. The trunk is divided at the tip so as to form two small, sensitive, grasping fingers, which are capable of being used for picking up quite tiny objects. The front feet have four hoofs, and the hind ones three. The female Elephant is smaller than the male, and the tusks are shorter and thinner.

The tusks are present in both sexes, although females are sometimes without them, and on rare occasions even males are tuskless. Tuskless females are common in the Addo Bush.

A dwarf race (*Elephas Africanus pumilis*) exists in the Congo regions.

African Elephants have been divided up into several sub-species or local races.

A gentleman related a most interesting episode. He was lying concealed watching for the appearance of a Bushbuck in the Addo Bush. Presently several Elephants passed across the glade he had under observation. A cow was seen to sit down on her haunches with one back leg bent, and the other extended on the ground to suckle its baby. When

the mother considered the little one had been sufficiently fed, it gently but firmly pushed it aside with its trunk and rose. This occurred during July 1918.

After good rains a certain natural dam or pond gets filled with water. On one side there is an incline, and after the elephants have slaked their thirst they walk round to the top of the incline and, crouching on their haunches, they slide down like children tobogganing, meanwhile screaming, grunting and trumpeting in a sheer abandonment of delight. The youngsters are sometimes noticed to be rather timid and nervous. In those instances the adults gently coax and wheedle them, and should they still hesitate they are pushed over the brink, and away they go down the slope and into the muddy water. To witness such a sight needs infinite patience and care. Much of what has been written about animals in the past is more or less inaccurate, being merely the outcome of reasoning on what an animal would be most likely to do under given circumstances. As a matter of fact they, as often as not, do the contrary.

Cow Elephants with small calves are often seen in the Addo Bush in the months of June, July and August. The calves seem to be born mostly about June.

A pathetic incident occurred one day. A farmer on the look-out for Bushbuck suddenly encountered a family consisting of a half-grown Elephant, a cow and young calf. The man instantly and wantonly

opened fire. The mother Elephant hustled its calf along with its trunk, meanwhile shielding it from danger with her body. Eventually she fell mortally wounded. The half-grown Elephant, which was no doubt the calf's elder brother, hearing his mother screaming, dashed back, and putting his trunk between the hind-legs of the calf, pushed the now unwilling youngster off as fast as he could. The so-called sportsman, unable to appreciate the sublime nature of this act, blazed away as fast as he could. The Elephant, now badly wounded, staggered and rolled on, still intent on saving his little brother. At last, receiving a mortal wound, he fell to rise no more. The calf, thereupon, ran back to its dead mother.

A resident of Addo related to me an instance which seems to show the Elephant possesses some capacity for fun. Following a bull, cow and calf in the Addo Bush, the spoor led past the nest of an ostrich. The eggs had been taken out of the nest and placed neatly in threes around it. The owner of the ostrich, who accompanied the gentleman, said one egg was missing. Following the spoor for about a mile, a termite hill was encountered, and the missing egg was balanced on top of it. The top of the heap was too round and smooth to balance the egg, so the Elephant flattened it slightly with its foot to receive the egg. Proceeding further, a large iron gate was found to have been lifted off its hinges and was gone. Half-a-mile further along, the spoor

entered a narrow road, and across this the Elephants had placed the gate in an erect position.

A venturesome native sallied forth one moonlight night into the Addo Bush to try and shoot a buck. Turning a corner of a big patch of bush he came upon a small group of Elephants. Trumpeting shrilly one of them charged. The native dropped his gun and fled. His only chance of life was to reach a windmill on Mr. Louis Walton's farm. Reaching his goal he lost no time in climbing up. The baffled Elephant raged and stamped, and impotently shook the iron standards of the windmill. The native was in a rather bad way aloft. He lay hanging over one of the iron cross-pieces, and in dreadful fear lest the wind would rise and start the wheel revolving, in which case he would have been dashed to the ground. After a couple of hours' siege the Elephant retreated, and the terrified man, now benumbed with cold, slid to earth and made for home.

The rogue Elephant " Longtoe," already referred to, was so called because one of his toes was abnormally long.

When seriously alarmed the Addo Elephants instantly scatter in all directions through the bush. Subsequently the herd bull trumpets loudly as a signal for the scattered herd to converge to him. When again united they travel several miles without a halt.

On a calm quiet night the Elephants can often

be located nearly a quarter of a mile away by the rumbling of the gas in their bowels.

A well-known and highly respected farmer was killed some years ago by an Addo Elephant. He captured a small calf Elephant which subsequently died. He was so charmed with its novel and frolicsome ways that he made up his mind to get another, against the advice of his friends, who gravely warned him of the risk he ran.

Encountering a cow with a small calf in the bush, he shot and wounded her. She charged, caught him up with her trunk, swung him in a half circle through the branches and twigs, and violently cast him down preparatory to stamping on him. Attrill's companion, a young European named Crick, of rather weak intellect and erratic habits, but nevertheless a keen and experienced hunter, fired repeatedly, but in the excitement of the moment failed to bring the Elephant down. Anyway, before the cow could stamp on Attrill's body, Crick succeeded in shooting her through the brain.

Attrill's neck was broken, and his body bruised almost to pulp by the terrific friction of the branches through which he had been swept by the vicious swing of the elephant's trunk, and the smashing force with which the Elephant hurled him to the ground.

The shock so affected Crick that he never recovered. He remained gloomy and morose, and a year later vanished utterly. Subsequently, a

farmer when hunting found the remains of Crick's body in the bush. His dog came out of a dense mass of scrub with a bone, which the farmer recognised as human. Investigations revealed Crick's body, or rather, skeleton, enveloped in tattered clothing. The skeleton was in a crouching position. The feet were still in the boots ; the knees were bent, the body resting on them, and the head was on the ground. Beneath the body lay a rusty revolver with one cartridge discharged. Retiring to the very heart of the Elephant-haunted bush, Crick destroyed his body that his spirit might join that of the man he loved. Crick was a most interesting character. Too restless and erratic to settle to any employment, he hunted the Addo Bush for game. For many days in succession he would disappear into the bush. Once upon a spoor he followed it up like a Red Indian, nay! I do him an injustice, a Red Indian was a tyro in comparison. Killing a buck he suspended it from a branch, kindled a fire and dined, returning when hungry to the carcase, until it was consumed or too decayed to eat. Only sheer hunger drove him back to association with his fellow beings. After earning enough money to buy ammunition, tobacco, salt, sugar and coffee, he disappeared into the bush. Contrary to Government regulations, he shot and killed many an Elephant. He took no chances of long shots. He would lie concealed half the night, and often all night, at a favourite Elephant resort. Waiting until an

Elephant was within a few yards, he would shoot it through the brain. One day, when gliding swiftly through the bush following the spoor of a Bushbuck, he collided with a sleeping cow Elephant. With a scream of rage she charged. Crick dived between her legs and was off like a hare. By dodging, doubling and making away down-wind he baffled her and escaped. Rather early one evening he shot an Elephant bull. The great beast came down to a sitting posture with the head on the ground. Thinking it was *hors-de-combat* he walked up to it. The Elephant rose and charged. Crick, quick as thought, shot upwards and dodged round its body to the rear. The bullet had entered the brain, and the Elephant fell dead.

When riding through parts of the Addo Bush I have seen miles of fencing destroyed by the Elephants. They smash it down to enable the calves to proceed. Sometimes the poles are pulled up or smashed in pure wantonness, the beasts resenting this encroachment on the land they have always regarded as their own. When a fencing post is too strongly embedded in the ground to pull up, the biggest bull puts one of his fore-feet on it and pushes, with the result that the pole invariably snaps in two. Riding along a newly-erected fence for a distance of five miles, it was noticed to be trodden flat every here and there for distances ranging from 50 to 500 yards at a stretch.

I noticed numbers of trees which had been

denuded of their bark by Elephants. The bark is sweet, and the Elephants feed on it. They peel it off with the finger-like elongations at the end of the trunk. With this wonderfully mobile and sensitive apparatus the Elephant is able to denude a tree of its fruit. I have seen trees in the Addo Bush covered with small berries, and the following morning the berries were all gone, and the ground around showed Elephant spoor and steaming dung. It was evident the Elephants had picked off the berries during the night or in the early morning.

The fellow-feeling, loyalty and attachment of Elephants for one another is very touching, and we could with advantage learn a good deal from them in this respect.

One day a cow Elephant was shot in the Addo Bush. The horde of coloured folk, who gathered like vultures, carried off the flesh, and the skin was dragged by two horses to a farm some miles distant. The bull, under cover of darkness, returned to seek his missing mate, and followed the spoor right up to the homestead. Judging by the trampled earth and vegetation, the poor, sorrow-stricken fellow must have loitered about for hours, loth to leave the spot. Realising eventually that she was dead, he wended his way sorrowfully back to the herd to impart the sad news.

The Addo Elephants flee in terror, as a rule, from a European, but a Kafir they despise, having learned

from experience that they race away in the extremity of fear when an Elephant puts in an appearance.

Mr. Oswald Smith was surveying out at Addo, and after the day's work the instruments were locked up in a stout little hut for the night. Returning the following morning he discovered the Elephants had been stamping round the hut, and had made desperate efforts to demolish it. Mr. Smith is assured the Elephants in passing got a whiff of the typical " Kafir odour," and locating it in the hut, they tried to get at their despised but hated enemy. The odour emanated from the instruments which Mr. Smith's native always carried.

These Elephants are very erratic in their behaviour under given circumstances. When shot at they will sometimes instantly charge in the direction of the smoke, and at other times they stampede in wild alarm. In the Addo Bush there are three herds known to exist. Each herd numbers about thirty individuals.

The farmers in the neighbourhood of the Addo Bush complain bitterly of the danger to life and the damage wrought by these Elephants, and demand their extermination. The late Captain McQueen, the African explorer, was commissioned by Government to make a report on this vexed subject. He reported that the Elephants broke out of the Addo Bush and invaded the neighbouring farms only when mad with thirst, and that if a sufficiency of water was provided in their haunts they would not break

out. In addition, he recommended Government to employ some Indian Elephant-tamers to capture and tame young Elephants, and train them to work after the manner of the Indian Elephant, and to raise revenue by selling them to various Zoological Gardens.

It certainly seems reasonable to infer that if the Elephants can obtain a sufficiency of food and water within the sanctuary of the Addo Bush, they will not make destructive raids to neighbouring farms. The Elephant is a highly intelligent animal, and does not risk its life unnecessarily. The whole trouble is that farmers have been allowed to acquire portions of the Addo Bush which should have been retained as an Elephant Reserve.

It has been suggested that a reservoir be constructed, and that a deep ditch be dug, or a strong fence erected, all around the Elephant Reserve. The distance to be enclosed is approximately 13 miles.

At present the Elephants are protected in the reserved portion of the Addo Bush, but farmers are permitted to kill them if they trespass on their farms. The exasperated farmers have spring-guns set at various parts of their farms, but so wily and sagacious are the Elephants that they rarely spring these guns.

One of the herds, maddened by thirst, attempted to get at a water-hole on Mr. Louis Walton's farm. The herd bull sprung the trap, and was shot through the neck. He turned, and after staggering about a

hundred yards he fell and died. The bushes and grass along his line of retreat were drenched with the poor fellow's blood.

The following report of the Select Committee chosen by the Cape Provincial Government to report on the Elephants, sums up the position :

" At the meeting of the Uitenhage Divisional Council, the report of the Select Committee appointed by the Provincial Council to inquire into the matter of Elephants in the Addo Bush was distributed to members for perusal by the Secretary, Mr. P. R. Heugh.

" The report was submitted to the Provincial Council on Wednesday, April 24th, 1918, and was as follows :

" Your Committee is of the opinion that the herd of Elephants in the Addo Bush Reserve has become such a source of danger and damage to the surrounding farms, that their continuance under present conditions has become intolerable. By breaking down fences and destroying water-works, and generally bringing about a state of terror and insecurity, they are the cause of actual damage to a certain extent, both immediately and in its consequences upon the breeding of cattle ; they hamper farming operations, and so put a restraint upon further agricultural development. In this connection your Committee would direct especial attention to the development now in course of undertaking by the Sundays River Irrigation Scheme. This scheme involves a main

canal from the Sundays River of some 36 miles in length, besides a network of subsidiary canals, and the irrigation of an area of some 10,000 morgen in extent. The mere presence of the Elephants in the vicinity of the canal, or their lying down in it according to their natural habit, would constitute a degree of danger and damage which it is impossible to overestimate. The scheme involves a cost of at least half a million pounds, and the projected settlement is intended to bring hundreds of new settlers upon the land.

"When the scheme is completed, and the subsequent new agricultural development undertaken, the presence of the water and the crops will constitute an additional attraction to the Elephants if then still left to roam at will. Their sudden appearance in unexpected places is a menace to peaceful traffic upon the highways, and to the free movement of farm-hands. By rendering the patrolling of the bush impossible they serve as a cloak for poachers, so that the Bushbuck has disappeared, or nearly so, and the Buffalo, which used to be found there in large numbers, is in danger of extermination. A peculiar hardship is that the adjoining farmers have no means of self-defence whatever against these depredations. The law allows them to destroy Elephants *in flagranti delicto* (which itself is no simple task except to a professional hunter of big game), but does not permit them to destroy the Elephants when trespassing, or when on their way to commit

damage. The amount of damage specifically testified to before us is necessarily only a small proportion of the total committed, but even that fraction must run into thousands of pounds, and no compensation has yet been obtained.

"Assuming that it is imperative that means shall be adopted for the future security and protection of the inhabitants, their farms, their cattle and their industry, the possible steps which can be taken resolve themselves into either extermination of the entire herd, or its reduction to such a number as will on the one hand be sufficient to ensure preservation, and on the other hand not too large for confinement within the Reserve. Your Committee may say at once that mere reduction of numbers without confinement will, in its opinion, not be an adequate step, and that suggestions put forward to remove the Elephants to some other habitat, or to some artificial place of confinement, or to domesticate them, appear not to be feasible.

"Your Committee is extremely averse to recommending extermination. The South African Elephant, now apparently restricted to a small remnant in the Knysna forests, and to those in the Addo Bush, while not specifically distinct from the Central African Elephant, does constitute a distinct variety, the extinction of which would be a loss to the world. The deliberate extermination of these Elephants would, upon grounds of deeply-felt general sentiment, and in the interests of science, be received by not

only very high and influential circles in South Africa, but by the general feeling of the civilised world with condemnation, as a step reflecting no credit upon South Africa.

"There remains, therefore, the question of reduction and confinement. Your Committee has not succeeded in obtaining data—indeed, there does not appear to be adequate data available—as to the actual number of the present herd, as to how many are sufficient for propagation and preservation, or as to the number that could be confined to the Reserve without the expense of artificial feeding.

"The existing Elephants have never been reliably counted. There are more or less vague estimates and guesses. Putting such information together as it could obtain, your Committee hesitatingly ventures its own guess that the minimum number may not be much below 100, nor the maximum much above 150. Until the actual number is definitely ascertained, it is, of course, impossible to determine how many animals could be destroyed to leave a safe remainder.

"If the above-mentioned uncertainties could be cleared up there would remain the question of the means to be adopted for efficiently confining the residue of the herd, of such size as may be determined upon, to the Reserve. The first problem is the enclosure. For this purpose either an enormously strong fence or else a deep trench has been suggested. Your Committee has not been able to obtain a

definite estimate of the probable cost of either. The cost would be very considerable—one guess places it at £20,000. The distance to be enclosed is approximately 13 miles.

"The construction of the enclosure would not, however, dispose of the requirements. In the absence of all certainty upon the point, your Committee will assume that the natural food of the Reserve (which is some 3000 morgen in extent) would be adequate to maintain a sufficient number of Elephants for preservation without artificial feeding. But the natural water-supply is totally inadequate—which indeed appears to be a main cause of the Elephants' present roaming proclivities. There are no natural sheets of water such as the Elephant loves, the occasional pools collected from rain water, and even the drinking supplies dry up after a short interval of cessation of rainfall.

"Therefore, for whatever small remnant of the herd was kept in the Reserve, it would be necessary to make artificial provision for water. It is not certain whether suitable underground supplies are available. The indications point both ways, but the preponderating expert opinion, which appears to be that of the Director of Irrigation, seems to be that the underground water, if found, would be salt and useless. We shall, therefore, possibly or probably be reduced to the construction of works for storage; and in view of the irregularity and paucity of the rainfall, the works necessary to ensure a suffi-

cient supply to carry over the longest drought would cost a considerable amount.

"These difficulties appear to your Committee to be so serious that it could not reasonably be expected that the Provincial resources should be called upon to surmount them unaided. If, as your Committee believes, the preservation of the animals is a national matter, the Union Government should be invited to undertake the task. If it should not see its way to do so, your Committee can only express its conviction, which it does with the most extreme regret, that there is no alternative but extermination.

"If, as a last resource, extermination be decided upon, or in the alternative a material reduction of numbers, the means of killing the animals will have to be considered. Even with a number of experienced big-game hunters the difficulties will be very considerable; and your Committee certainly does not recommend that the task be committed to amateurs. If a number of Elephants were wounded or merely stricken with panic, they would spread terror and destruction over the countryside. Poisoning has been suggested, but your Committee contents itself with merely noting the suggestion. Its adoption would probably be received with a howl of indignation from the sporting and scientific world.

"In conclusion, your Committee would emphasise that this Report cannot profess to be anything more than merely tentative. The dilemma with which it has been faced is so difficult, and the issues

of any course of action are so grave or alternatively so costly, that with the time at its disposal and the material available any exhaustive inquiry by the Committee was impossible. The Executive might consider the advisability of appointing a Commission to make a more detailed investigation."

The problem was a thorny one. Sentiment was strong in favour of the preservation of the Elephants, they being the sole survivors of the race which inhabited South Africa in large numbers in bygone days. The situation was an impossible one. The land near the Addo Bush was being slowly but steadily developed and occupied by settlers, and it was apparent that a herd of Elephants could not possibly be allowed to exist in the midst of these settlements unless their needs were adequately provided for. Apart from the destruction of the herd, the only other solution was to enclose a sufficiently large portion of the Addo Bush with an elephant-proof fence, and secure a permanent water supply for the beasts therein. Boring was suggested. Another plan was to construct a water-furrow from Sundays River. Various other schemes in regard to fences and water were discussed. Meantime the farmers clamoured for the destruction of the Elephants. Resolutions were sent to the Administrator of the Cape Province, and deputations from Farmers' Associations interviewed him. Eventually it was decided that seventy-five Elephants be slain as a beginning.

Major Pretorius, an elephant hunter of repute from East Africa, was engaged to do the killing. The slaughter is now in progress. Pretorius has his camp at Kenkelbosch, and he has already shot upwards of thirty-five Elephants and captured a number of calves.

A telegram from the Administrator of the Cape Province to Mr. T. W. Reynolds, a Member of the Provincial Council, gives the latest information in regard to the destiny of the Addo Elephants before going to press (February 1920).

"The following is the position: Pretorius considers the total number of Elephants originally existing on his arrival to have been one hundred and thirty. Our modified arrangement with him is to kill seventy-five. Subsequently it was arranged with Government that we should leave fifty-five on farms Mentone and Strathmore. We intend passing legislation in March creating these two farms an Elephant Reserve provided that if any Elephant leave the Reserve it may be shot at sight by anybody anywhere, and tusks and skins shall belong to owner of property where Elephant is shot. No license will be required. No close season will be created. It is believed that Government will provide water on its farms, and with the reduction of over one-half of the herd and the wise provisions of the intended legislation all parties, both those who are total exterminators and others who dislike seeing total extermination, will be

satisfied. The Elephant is a sagacious animal and will soon learn where safety exists and where the danger zone commences. The only question is one of water, and this should be provided. Your correspondents should remember that up to now the Addo Elephant has been a protected animal, whereas under the new conditions his life will be forfeit the moment he leaves the Reserve. The above should allay all fears of the farmers. The Provincial Council has the whole matter in hand, and members will have an opportunity in March to approve or disapprove of what the Administrator proposes."

However, the farmers in the neighbourhood of the Addo are determined that the herd shall be completely exterminated. Major Pretorius says the farms Mentone and Strathmore will *not* provide food for more than sixteen Elephants, and that unless an elephant-proof fence is put round the reserve, and two Keepers or Rangers appointed, the Elephants will stray and be shot. Within four years, Major Pretorius declares, there will not be a single Elephant left.

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